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MATHEWS'

MEDICAL QUARTERLY

A JOURNAL DEVOTED TO

DISEASES OF THE RECTUM, GASTRO-INTESTINAL DISEASE,

AND

RECTAL AND GASTRO-INTESTINAL SURGERY.

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GENERAL INDEX.

PAGE

Abdominal Sinuses and Fistulæ 58
Abscess, Rectal 210
Adler, Lewis H., jr. 383
Allison, Charles C. 22
Allingham, Herbert 288, 353
Allingham, Mr. William. (*Frontispiece*) 114
American Doctor, The (Editorial) 451
Anal Valves, Their Origin and Significance 191
Appendicitis 36, 411
Appendicitis (Editorial) 112, 287
Appendicitis, Inch-and-a-half Incision, a Week-and-a-half Confinement in 50
Appendicitis From a Medical Standpoint 422
Appendix, The Relation Between the Gross Anatomy of, and the Clinical History of Appendicitis 239
Bacon, Joseph 1
Bacon's Rectal Stricture Anastomosis 534
Ball, Charles B. 191
Ball, Charles B. (*Frontispiece*) 289
Bernays, Augustus C. 66
Billroth, Theodore 296
Bishop, H. M. 388
Books and Pamphlets Received 187, 348, 505, 629
Brown-Séquard, Charles Edouard 466
Bryant, Joseph D. 239, 573
Bryson, John P. 62
Butler, Thomas L. 248
Book Reviews—The American Text-Book of Surgery for Practitioners and Students, by American Authors, 180....The Principles and Practice of Surgery, by John Ashhurst, jr., M. D., 183....Intestinal Diseases of Children, by A. Jacobi, M. D., 184....Practical Intestinal Surgery, by F. Byron Robinson, M. D., 185....Fissure of the Anus and Fistula in Ano, by Lewis H. Adler, jr., 185....Diarrhea and Dysentery, by A. B. Palmer, M. D., 186....The Student's Quiz Series, Surgery, by B. B. Gallaudet, M. D., and Chas. N. Dixon-Jones, M. D., 186....Hernia, its Palliative and Radical Treatment in Adults, Children, and Infants, by Thos. H. Manley, M. D., 344....Antiseptic Theraputics, by E. L. Trouessort, M. D., 345....A Syllabus of Lectures on the Practice of Surgery, by N. Senn, M. D., 345....Holden's Manual of the Dissection of the Human Body, by John Langton,

Book Reviews—Continued— PAGE

M. D., 346....Proceedings of the Philadelphia County Medical Society, 346....The Modern Climatic Treatment of Invalids with Pulmonary Consumption in Southern California, by P. C. Redmondino, M. D., 347....Diseases of the Rectum and Anus, by Alfred Cooper, F. R. C. S., and F. Swinford Edwards, F. R. C. S., 498....A Manual of Nursing in Pelvic Surgery, by Lewis S. McMurtry, A. M., M. D., 501....Lectures on Auto-intoxication in Disease, by Ch. Bouchard, translated by Thomas Oliver, M. D., 502....Teratologia, edited by J. W. Ballantyne, 503....The Physician's Wife, and the Things Which Pertain to Her Life, by Ellen M. Firebaugh, 503....Translations of the American Pediatric Society, 504....An American Text-Book of Diseases of Children, Edited by Louis Starr, 621....International Clinics, 625....Summer Complaint and Infant Feeding, by W. S. Christopher, M. D., 626....A Hand-Book of Medical Microscopy for Students and General Practitioners, by James E. Reeves, M. D., 627....Where to Send Patients Abroad for Water Cures and Climatic Treatment, by Dr. Thomas Lynn, 627....Specific Medication, by John M. Scudder, M. D., 628....The Care and Feeding of Children, L. Emmett Holt, M. D., 628....Treatise on Diphtheria, by H. Bourges, M. D., 629....Intercolonial Quarterly Journal of Medicine and Surgery, 629.

Cancer of the Rectum, Some Points in Regard to Operation for 17
Care of Patients for Surgical Measures in Rectal Disease..... 198
Colotomy (Editorial)..... 285
Colotomy, Transverse 353
Colotomy, A Plea for More Frequent and Earlier, in Painful Malignant Disease of the Rectum..... 26
Cook, George J..... 530
Correspondence 29, 115, 455, 465
Dabney, William Cecil..... 563
Diarrheal Discharges, Significance of as a Symptom of Rectal Disease... 521
Digestive Tract, Landmarks of the 230
Diverticulum, Meckle's, Three Cases of 409
Dundore, Claude A. 357
Earle, Samuel T. 222
Edwards, Frederick Swinford (*Frontispiece*)..... 562
Fissure of the Anus and Painful Erosion of the Rectum in Infants and Young Children 29
Fissure or Irritable Ulcer of the Rectum: Non-Operative Method of Treatment..... 383
Fistula in Ano, Treatment of..... 530
Fistulatome, a Tunneled 542
Gallant, A. Ernest..... 578
Gant, S. G.....390, 521
Gastric Ulcer..... 246
Gastrostomy for Cicatricial Stricture of the Esophagus; Report of a Case. 250

PAGE

Grant, H. Horace 427
Green, Waller O. 198
Greeting (Editorial) 111
Griffiths, William M. 116
Hamilton, John B. 58
Happel, T. J. 411
Hemorrhoids, A New Bloodless Operation for Excision of, With Healing by First Intention 388
Hemorrhoids, Operative Technique in Cases of, With a New and Safe Method of Injection 22
Hemorrhoids, Outerbridge's Operation for 518
Hemorrhoids, Something on the Etiology and Pathology of 222
Hemorrhoids, The Treatment of, as Practiced by American Surgeons 357
Hernia, A Case of Strangulated 248
Hernia, The Management of, in Children 225
Intestinal Anastomosis 427
Intestinal Obstruction, Report of Two Cases of 73
Kentucky School of Medicine (Editorial) 561
Koplik, Henry 29
Kraske, The Modified Operation (Editorial) 113
Kraske's Operation, Modification of 542
Kraske's Operation, With Report of Cases and the Utilization of an Enlarged Murphy Button for the Approximation of the Divided Ends of the Rectum 76
Krim, J. M. 246
Lanphear, Emory 17
Larynx, Pathological Conditions of, Occurring as a Symptom of Gastro-Intestinal Disorders 54
Letter from South Africa 294
Letter from Africa 465
Manley, Thomas H. 214
Marcy, Henry O. 80
Mathews, Joseph M. 210
McDermott, T. L. 422
Morris, Robert T. 50
Morton, Daniel 15
Murphy Button, The 534
Necrology 116, 296, 466
New York Letter 288, 455
Nomenclature of the Gastro-Enteric Tract of Children (Editorial) 559
Notes and Queries 189, 352, 510, 633
Outerbridge, Paul 115
Proctitis, Acute Inflammatory, Hypertrophic and Atrophic 7
Rectal Surgery, Fifty Cases of 379
Rectal and Anal Surgery, A Synopsis of One Year's Work in 390
Rectal and Gastro-Intestinal Surgery, Lectures on 396

PAGE

Rectum, Excision of 542
Rectum, Prolapse of, Physiological Rest in Treatment of 573
Resection of the Rectum for the Removal of Malignant Growths 80
Ricketts, B. Merrill 379
Robinson, F. Byron 36, 230
Robinson, Byron 548
Ruth, C. E 534
Samuel, Fouchee Warren 250
Societies: Louisville Surgical 86, 277, 552
Louisville Clinical 100, 260, 430
Louisville Medico-Chirurgical 271, 434
Specialism in Medicine (Editorial) 452
Sphincter Ani, The Rôle of, in Rectal Surgery 15
Sphincter Ani, A Few Observations on the 214
Sphincteropoesis: Improvements and Suggestions in Regard to the Operation of Colotomy 66
Stomach Diseases of Women 548
Straus, Leon 26
Strictures of the Rectum, The Radical Treatment of, Viewed from the Standpoint of Its Etiology 62
Strictures of the Rectum and Sigmoid, A New Operation for the Cure of. 1
Tuley, Henry E 409
Tuttle, James P 7
Vance, Ap Morgan 225
Volume I. (Editorial) 539
Walker, H. O 76, 390, 542
What Our Friends Say 118, 298
Woodbury, Frank 54
Word to the Busy Doctor 123, 306, 468, 565
Wyeth, John A. 73
With Our Exchanges—*Diseases of the Rectum*—
Adler, Lewis H., jr. 318
Allingham, Herbert 128
Allison, Charles C. 580
Anal Dilatation 161
Anal Fissure, Palliative Treatment of 318
Anal Fissure 324
Anesthesia, Systematic, for Examination of Rectum, etc. 581
Anus, Imperforate, with Recto-Vaginal Fistula in Patient Nineteen Years Old 480
Anus and Rectum, Three Cases of Malformation of 481
Anus and Rectum, Imperforate 154
Anus, Vaginal, Treatment of 582
Beck, Carl 577
Bronson, E. B. 158
Brown, Dillon 481

Diseases of the Rectum—Continued— PAGE

Brown, W. S. 315
Cripps, Harrison 574
Davey 582
Deaver, J. B. 471
Duke, Alexander 324
Elliott, Llewellyn 572
Engle 164
Europhen in Rectal Ulcer and Kraurosis 162
Falk, J. C. 165
Fistula in Ano, Report of Cases 474
Fistula, Recto-Vulvar 571
Gay, George W 569
Gerster, Arpad G. 128
Green, C. M. 571
Green, W. O 481
Hare 165
Hartman, M. 164
Heinecke, V. 575
Hemorrhoids 165, 322
Hemorrhoids, A Bloodless Operation for 150
Hemorrhoids, A Simple Method of Treating the Wounds After Excising 326
Hemorrhoids, Causation of 572
Hemorrhoids, Ethereal Solution of Iodoform in Treatment of 577
Hemorrhoids, Modern Treatment of 570
Hemorrhoids, The Best Treatment of 579
Hemorrhoids, The Conservative Treatment of 325
Hemorrhoids, The Operative Treatment of 483
Hemorrhoids, Treatment of 576, 578
Hemorrhoids, Treatment of 164
Hemorrhoids, Treatment of, by Injection 572
Hemorrhoids, Whitehead's Operation from an Anatomical Standpoint 321
Jelks, J. T. 474
Jenkins, W. T. 575
Jones, Robert 326
Lantz 154
Leloir 326
Manley, Thomas H. 150
Mathews, Joseph M. 310
McCosh 164
Montgomery, E. E. 324
Morton, Thomas G. 558
Nunn, Thomas W. 162
Oatman 477
Philpot, F. B. 322
Piles, A New Operation for 576

Diseases of the Rectum—Continued— PAGE

Piles: The Importance of Recognizing the Varieties as Determining the Treatment 145
Proctitis 165
Pruritus 158
Pruritus Ani 576
Pruritus, Electricity in 326
Quénsee 572
Reclus, P. 325
Reclus 576
Rectal Catarrh 165
Rectal Hemorrhages in Women 315
Rectal Surgery, Points to be Remembered in 477
Rectal Tube, Dangers of 574
Recto-Vulvar Fistula 571
Rectum, Cancer of 164
Rectum, Contribution to the Surgery of 128
Rectum, Carcinoma of, Operation for 575
Rectum, Foreign Body in 575
Rectum, Malignant Diseases of 569
Rectum, Ulceration of 580
Rectum, Ulceration of: The Etiology, Diagnosis, and Treatment of .. 310
Rucker, G. R. 578
Sendler 483
Sphincter Ani, Value of Stretching in Chloroform Collapse 324
Sphincter, Formation of an Artificial, After Extirpation of the Rectum 163
Stevens, Edw. F. 579
Stricture of Sigmoid Flexure and First Portion of the Rectum 471
Stricture, Report of Five Cases of Congenital 159
Strizovere 165
Thompson 321
Thompson, Mr. Henry 480
Tuttle, J. P. 570
Vermiform Appendix, Excision of, for Chronic Relapsing Appendicitis in the Interval 558
Waugh, ... 162
Werner 159
Williams 163
Wright, J. S 576

Gastro-Intestinal Disease—

Abdomen, Penetrating Knife-Wound of 603
Acid Lactic, in Diarrhea 179
Alimentary Canal, The Washing and Disinfection of 332
American Pediatric Society 596
Anderson, Edw 620

Gastro-Intestinal Disease—Continued— PAGE

Anorexia Nervosa.... 601
Appendicitis....175, 607, 612
Appendicitis in Children 491
Appendicitis, Two Cases of 338
Appendicitis, The Treatment of....178, 612
Appendix, Colic of.... 605
Appendix, Examination of, Removed in the Interval of Attacks.... 495
Appendix, Perforation of, by a White Bean 604
Ascaris Lumbricoides in an Infant Aged Three Weeks.... 341
Bacillus Coli Communis, Importance to the Surgeon of.... 342
Bacterium Coli Commune, Cause of Appendicitis.... 594
Baird, T. M.... 166
Bassini's Operation in Hernia 343
Bell 338
Bowels, Obstruction of.... 620
Brissaud....169, 618
Caddy, J. D.... 179
Caird, F. M.... 335
Cantrell, J. K.... 619
Carstens, J. Henry.... 605
Cholecystenterostomy.... 603
Chopparro Amargoso, a New Treatment of Chronic Dysentery.... 339
Chronic Constipation, Fruits in.... 179
Cohen, S. Solis 494
Collins, W. J. 601
Colon, Stenosing Carcinoma of Transverse 616
Deansley, Edward 484
Deaver, John B. 491
Diarrhea 176
Diarrhea of Children.... 173
Diarrhea of Nursing Infants 177
Diarrhea, Salol in.... 586
Diarrhea, Summer, Treatment of, in Children.... 166
Diarrheas, Knotgrass in.... 177
Diseases of the Stomach and Intestines, Frequent Mistake Between.. 497
Diverticulum, Meckle's, Prolapse of.... 496
Dunlap, F. 176
Dysentery, Amebic.... 610
Dyspepsia of Nurselings.... 175
Ekehorn, G.... 594
Enteric Disorders of Childhood.... 617
Enteritis, Membranous, in Child.... 617
Entero-Vesical Fistula, Treated by Laparo-Enterectomy.... 600
Fenwick, Soltau.... 619
Fistula, Entero-Vesical.... ... 600
Fitch.... 178

Gastro-Intestinal Disease—Continued— PAGE

FRIEDENWALD, JULIUS 613
Gastric Carcinoma, False 599
Gastric Catarrh, Large Doses of Bismuth in 584
Gastric Neurasthenia 327
Gastric Neuroses in Childhood 598
Gastric Ulcer, Diagnosis and Treatment of 620
Gastric Ulcers, Ruptured, Successfully Treated by Abdominal Section and Suture 590
Gastric Ulcer, Three Cases of Perforative, With Remarks on Its Operative Treatment 484
Gastrodiaphane, Einhorn's 494
Gastro-Intestinal Anastomosis 497
Gastro-Intestinal Hernia in a Child, A Case of 178
Gastrostomy 604
Gastrostomy, After the Method of Witzel 335
GERMARIS 497
GERSUNG 611
GRAHAM, JAMES 607
GUNN, N. D. 327
HALDEMAN, F. D. 585
Hemorrhage, Fatal Gastro-Intestinal, in Child 618
HERMAN, W. B. 604
Hernia, Coughing-Taxis in Reduction of 609
Hernia, Strangulated Inguinal 496
Hernia, Umbilical, New Operation 611
HERTER, C. A. 583
HEUSTON, F. T. 600
HUCHARD 599
Intestinal Hemorrhage, After Reposition of Incarcerated Hernia 602
Intestinal Obstruction, Due to Impacted Gall-Stones, The Diagnosis of 174
Intestinal Putrefaction, Excessive 583
Intestinal Tuberculosis of Childhood 170
Intestine, Arrested Development of 608
Intestine, Resection of Strangulated 591
Intestines, Atony of 613
Intestines, Nervous Affections of 606
Intussusception 172, 492
Intussusception, Ileo-Colic, With Very Low Temperature 179
Intussusception, Puerperium 585
Intussusception, Reduction of, by Air and Water 592
JACOBI, A. 179
LAHNSEN 606
LAIRÉ 603
LILIENTHAL 616
LIVEZEY 173

Gastro-Intestinal Disease—Continued— PAGE

Lockwood, C. B. 591
Lojkin 179
Lund, F. B. 614
Manges 616
Mantigneau, J. J. 497
Miller 341
Miller, D. J. M. 343
Milliken, S. E. 343
Mixon, J. W. 339
Morse, T. H. 590
Morton, T. G. 495
Murphy, F. E. 610
Nomenclature of Diseases of the Gastro-Enteric Tract, Reasons for Adopting a New 596
Railton, T. C. 496
Paquin, Paul 332
Park, Roswell 342
Patterson, Stuart 617
Pennington, J. R. 615
Peritonitis, Perforative, in a Newly Born Infant With Petrifaction of the Escaped Meconium 173
Pick 584
Piles, Classification and Treatment of 615
Potain 620
Prezowski, Edw 606
Prichard, A. W. 492
Pryn, W. W 618
Rectum Emptying in Bladder 619
Rosenbach 620
Schultze, Julius 602
Shawl-pin Swallowed by an Infant Recovered by the Dejections on the Third Day 343
Sherman, H. W. 496
Sigmoid Flexure, Cancer of 613
Skinner, C. G. L. 586
Smith, R. K 603
Snow 598
Stepp 611
Stomach Affections Treated by Sodium Bicarb 620
Stomach, Cancer of, and Treatment 618
Stomach, Cancer of, Chlorate of Soda in 169
Stomach, Chronic Ulcer of, Treatment of 611
Summer Complaint 178
Stomach, Diphtheria of 619
Stomach, Lavage, in Treatment of Diseases of 588
Stomach, Tuberculosis of 606

Gastro-Intestinal Disease—Continued— PAGE

Stowell, William L. 608
Strausz, P. H. 588
Sutton, Cayley 593
Swayne, James 612
Tape-worm the Cause of Rupture of the Intestines 176
Thompson, John 617
Touissaint 177
Trapeznikoff, A. V. 177
Treves, F. 178
Typhoid Perforation, Excision in 593
Vasilieff, V. N. 179
Wherry, George 609
Wood, A. Jeffries 592
Worcester, A. 175, 612
Wyman 604

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MATHEWS'

MEDICAL QUARTERLY.

"ALIS VOLAT PROPRIIS."

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Original Contributions.

A NEW OPERATION FOR THE CURE OF STRICTURES OF THE RECTUM AND SIGMOID.

BY JOSEPH B. BACON, M. D.,

Professor of Rectal Surgery in Chicago Post-Graduate Medical School and Hospital.

[Written for MATHEWS' MEDICAL QUARTERLY.]

After a painstaking trial in treating a large number of strictures of the rectum by means of electrolysis, gradual dilatation with bougies, proctotomy, total extirpation of the strictured part of the rectum, and inguinal colotomies, many of which cases in the end gave unsatisfactory results, I came to the conclusion that the only rational method for curing this troublesome class of cases would be by forming a new channel around the stricture by folding the gut immediately above the constricted portion of bowel down over the stricture and anastomosing it with the rectum just below the narrowed part of the gut, then at a subsequent operation clamp away the septum that has been formed by the union of the approximated surfaces of the folded piece of gut with the rectal wall (Fig. 1).

By this means we are able to perform a complete severing of the cicatricial stricture band and to keep it from reforming, because the healthy gut utilized in building the new channel around the stricture acts as a connecting link between the two ends of the stricture band that is severed by the clamp. The irritation is removed and the cicatricial mass is gradually absorbed.

The anastomosing of the bowel above the stricture with the bowel below would in no case be of more than a temporary

benefit, because the extensive amount of fibrinous connective tissue in the rectal wall would soon contract and cause fecal impaction.

The clamping away of the newly formed septum (Fig. 3, A-B) is the important part of the operation, for by this means the new channel is added to the caliber of the rectum (E to D, Fig. 3), and all fecal obstruction is removed.

As most rectal strictures involve the levator ani, one can readily see from the anatomy of the parts that the anastomosis

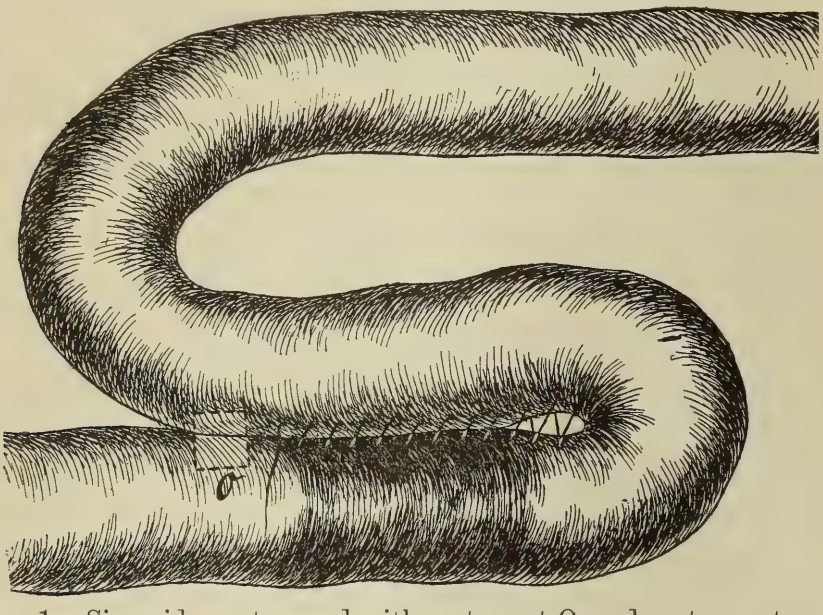

FIG. 1.—Sigmoid anastomosed with rectum at O, and septum sutured.

could not be made by any device requiring sutures, and on this account I was unable to successfully carry out the practical part of the operation until I saw that ingenious device, the Murphy button. This operation is applicable to all strictures occurring between the internal sphincter and the upper part of the sigmoid.

The operation is performed as follows for all cases where the stricture involves the levator ani or the gut above:

After complete anesthesia the patient is placed in the extreme Trendelenberg posture, and a laparotomy is made in the median line from the pubis to the umbilicus. This incision will enable the operator to see the rectum and measure the extent of the contraction, and to decide how much of the sigmoid he must use to fold over the stricture and anastomose below. Having determined

the amount, the sigmoid is drawn well up into the abdominal wound, and an assistant places a small Murphy clamp above and below that point of the gut selected for the anastomosis button. An incision is now made into the gut and the male half of the

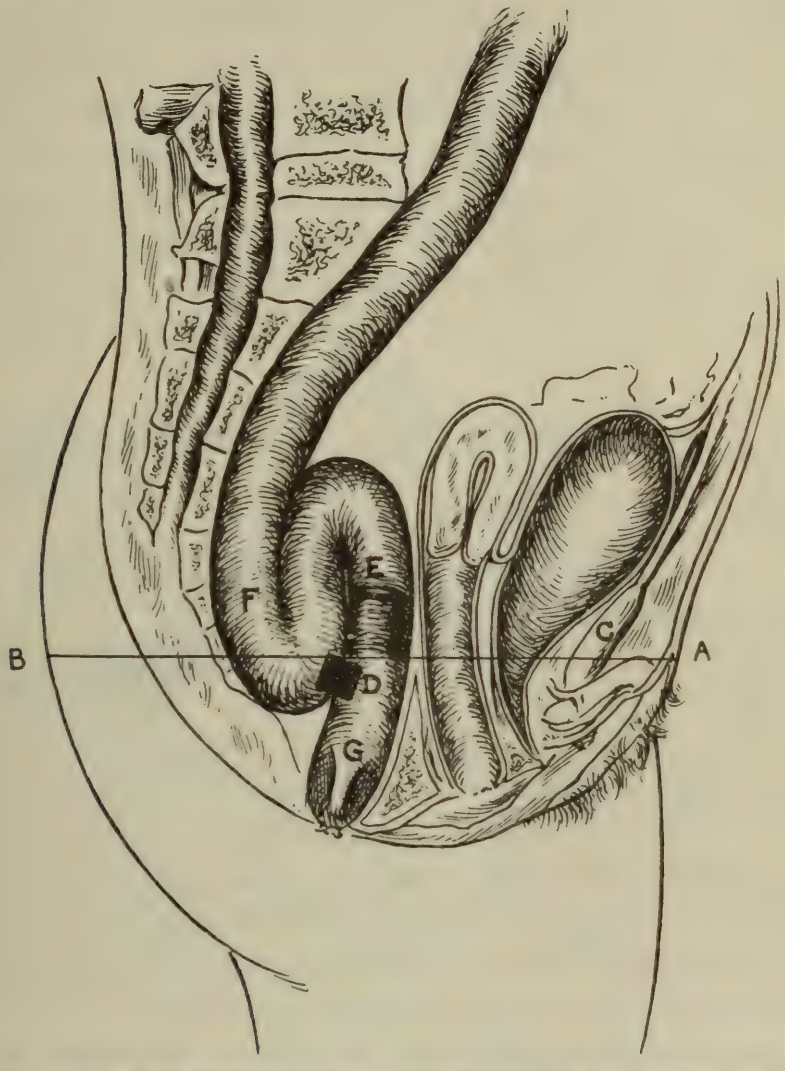

FIG. 2.—Line A-B represents the lower limit of the levator ani; D, the anastomosis buttons in position after sacral section.

button firmly secured in position in the usual way. This half of the button is now carefully held by an assistant, while the operator scarifies the surface of the sigmoid and rectum that are to be approximated.

The next step in the operation is to place the female half of the button in position just below the stricture, and is done as follows:

An assistant takes the instrument (Fig. 4), places the female.

half of the button over the trocar point, and inserts the button through the anus and up the rectum to the lower border of the stricture; keeping the point of the trocar guided anteriorly, he presses the neck of the button against the anterior rectal wall. The operator, by feeling down into the pelvis through the abdominal incision, readily finds the point of the trocar, and, by pressing directly over it with a pair of dressing-forceps, the trocar perforates the rectal wall and carries the neck of the button with it. This half of the button is now seized by the operator's left hand, and, taking the male half in his right, the two halves are approximated, and the anastomosis is complete. Two or more sutures are now put in the peritoneal layer of the gut at C-C, Fig. 3,

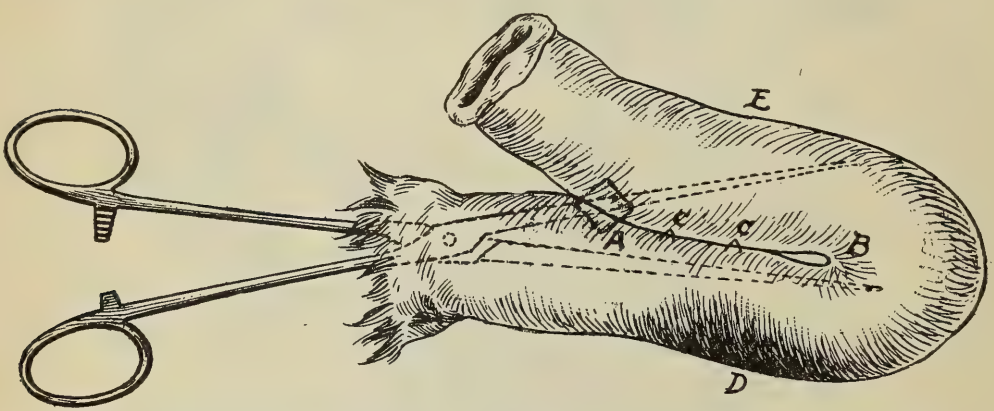

FIG. 3.—Showing instrument in position for clamping away the septum, A-B; C C, sutures approximating the walls of the septum; D, strictured part of the rectum.

so as to hold the previously scarified surfaces together and secure a firm union and form a septum (A-B, Fig. 3), also to prevent the possibility of a loop of small intestine getting between the approximated surfaces and endangering the life of the patient when the clamp is applied as in Fig. 3. If the bowels have been thoroughly evacuated before the operation, and great care has been taken in applying the button, no feces can have escaped into the abdomen, and irrigation of the peritoneal cavity will not be necessary.

The abdominal wound is now closed and the patient treated as after any ordinary laparotomy.

The button will be expelled as a rule in from five to seven days, when an enema may be given and the rectum and colon thoroughly evacuated.

A clamp is now inserted through the anus, one blade of which is introduced through the button-hole (A, Fig. 3), and the other blade through the stricture opening (D, Fig. 3), and firmly clamped upon the septum (A-B, Fig. 3). Each succeeding day the handles of the clamp are pressed together one or two notches until the septum is completely severed, usually by the third day. The caliber of the rectum will now be increased by the addition of the extra channel, as represented (E-D, Fig. 3).

In cases where the rectal stricture extends down almost to the internal sphincter the operation may be done by the sacral method, as represented in Fig. 2. Instead of making a laparotomy the patient is placed upon the side and the soft parts are severed by an incision beginning just above the internal sphincter and

FIG. 4.—Instrument for inserting the female half of the button.

extending in the median line up to the middle of the sacrum. The coccyx is dissected out, and the two lower sacral vertebræ are chiseled away, as in the Kraske operation for extirpation of the rectum. This incision permits one to operate upon the rectum at its upper portion.

The rectum is dissected loose above the stricture, and if necessary the sigmoid is used as in the previous operation and folded down over the stricture, as seen in Fig. 2, F, and anastomosed below the stricture at D, Fig. 2, and the approximated surfaces sutured, as in Fig. 2, D to E. The edges of the peritoneum are now sutured to the wall of the gut, and the wound packed with iodoform gauze, over which a large pad of sublimated gauze and cotton is firmly applied, and the whole held in place by a roller bandage. This dressing should not be changed until loosened by moisture, in about five days, when the peritoneal cavity will have become closed in by granulations. After the button has been expelled the bowels are moved by an enema and the clamp applied to the septum, as in Fig. 3.

Where the sigmoid mesentery is normal in length, strictures of the sigmoid may be treated by the same operation as for strictures of the rectum.

A laparotomy is made, the sigmoid secured, and the male half of the button is fastened into the gut just above the stricture, and the female half placed in position in the rectum. The strictured part of the gut can be drawn down into the pelvis, and at the Douglas or recto-vesical pouch anastomosis made with the rectum at a point accessible for applying the clamp, as in the operation for rectal stricture. I performed this operation upon four dogs, a year ago, at the Post-Graduate Medical School. Two of the operations were done by laparotomy, and two by the sacral section. All four were operated upon by the clamp afterward, and made excellent recoveries with perfect results.

The specimens were secured after a sufficient time had elapsed for perfect union of the contiguous parts, and shown before the American Medical Association, June, 1893. Since then I have, with the assistance of Drs. Murphy and Lee, of this city, performed the operation successfully upon one case, a woman with an old specific rectal stricture.

Many cases of rectal strictures of long standing cause the gut above the constriction to become greatly distended until it resembles a pouch or sack, and in such cases the wall of the rectal pouch could be easily anastomosed to the rectum below the stricture without utilizing the sigmoid, and the septum clamped away afterward, as in the other operation.

In those cases of rectal stricture where the cicatricial tissue is yet confined to the bowel wall, even if the stricture extends below the levator ani, it can be reached by a laparotomy, the Douglas pouch opened, the vagina dissected loose from the rectum, and the sigmoid drawn down and anastomosed below the stricture. Or, if in the male, the recto-vesical pouch can be opened, the bladder dissected loose from the rectum, and the gut folded over the stricture and drawn down through the levator ani, and anastomosis made below the stricture. The object of introducing the female half of the button through the anus is to avoid the necessity of suturing this half of the button in place, as only a small opening in the wall of the rectum sufficient to receive the neck of the button is required. A sufficient length of the bowel above the stricture must be utilized for forming the new channel, so that there will be no dragging upon the button when the anastomosis is completed. Thorough evacuation of the bowels before

the operation is necessary, so that they may be confined afterward until the button has passed. The smallest size button is preferable, because the only object in using the button is to form a fistulous opening between the two guts through which one blade of the clamp can be passed.

Advantages of the Operation. 1. There being ten-fold more fibrinous connective tissue in the rectal walls than in any other part of the intestinal tract, and this tissue being in direct anastomosis with the pelvic fasciæ, any end to end anastomosis of the rectum, either with a button or by suturing, will leave a dense circular cicatrix that must contract and reform a stricture. This operation enables us to avoid a circular cicatrix.

2. It permits us to completely divide the stricture, and by a plastic operation prevent its reforming.

3. It enables us to bring a stricture of the sigmoid down where it can be divided without the danger of making an end to end union after extirpation of the stricture.

4. Obviates the necessity of a colotomy.

5. Is applicable to both strictures of the rectum and sigmoid.

6. *The sphincters are left intact and continence insured.*

CHICAGO, ILL.

ACUTE INFLAMMATORY, HYPERTROPHIC, AND ATROPHIC PROCTITIS.

BY JAMES P. TUTTLE, A. M., M. D.,

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[Written for MATHEWS' MEDICAL QUARTERLY.]

Inflammation of the rectum is so generally present with the various other affections of that organ that it is too often looked upon as a symptom rather than a disease in itself. In our surgical enthusiasm we are so anxious to obtain rapid and brilliant cures that we seize upon the first ostensible cause of trouble in these parts which is amenable to operative treatment, and expect by removing it to achieve success and obtain our patient's gratitude as well.

When a patient complains of pain in the sacral region, sense of weight and burning in the rectum, itching, constipation, dis-

charges of mucus, pus, or blood, and upon examination is found to be suffering from hemorrhoids or an anal fissure, we are too apt to conclude that this is the sole cause of his trouble, forgetting that they both are often symptoms, secondary developments, of other forms of disease. How often have we been disappointed in our prognoses of complete relief after operations for these troubles; how often have our patients gone on suffering more or less of the same old symptoms as before! Such failures are due, I believe, to superficial diagnostication. If we carefully examine every case of hemorrhoids or fissure, in a large number we will find above the apparently offending point a condition of general congestion or inflammation of the mucous membrane of the rectum, either acute or chronic, and which, if left untreated, will continue to annoy our patients, whatever operation we may do for them.

I do not propose in this brief paper to discuss the specific forms of proctitis, such as dysenteric, diphtheritic, erysipelatoid, gonorrheal and syphilitic. My desire is to call attention to the three forms of primary proctitis, the acute inflammatory, the hypertrophic, and the atrophic catarrhal proctitis.

Acute inflammatory catarrh of the rectum resembles the disease elsewhere. It comes on suddenly, and may be generally traced to a clearly defined exciting cause. The mucous membrane presents a swollen, purplish red appearance. The capillaries and veins are swollen, and extravasations of blood may sometimes be seen beneath the surface. There may be protrusion from the anus, and upon the protruded mucous membrane varicose hemorrhoids may develop, and thus give the appearance of strangulated piles. The disease is confined to the mucous and submucous layer, the muscular layer of the intestine being rarely invaded.

Symptoms. Tenesmus, burning, constant but ineffectual desire to defecate, pain radiating to legs, back, and pubic regions, difficulty in micturition, fever, with coated tongue, quickened pulse, and headache are the general symptoms of this variety of the disease. The patient feels as if a foreign body were in the rectum, the sphincters do not relax, and the fecal matter, which is usually fluid, is ejected in a small stream. The patient may develop at the same time a leucorrhea or cystitis, but in such

cases we should very carefully eliminate the gonorrheal element from the case. After twenty-four hours pus and blood may begin to be discharged from the rectum, and in some cases the whole mucous membrane of the rectum may slough off and be discharged. I have never seen this; and while I trust implicitly the eminent observers who have reported it, I can not but suspect the cases were those of diphtheritic or erysipelatoid proctitis. After suppuration begins frequent calls to defecate are imperative, which result in the passage of small quantities of pus and mucus tinged with blood. The act does not relieve the desire, and the patient sits straining upon the commode. In this stage the disease is most easily mistaken for dysentery. Under proper treatment the inflammation subsides, the eroded or sloughed-off mucous membrane is restored, and the organ resumes its normal condition. I have never known of a stricture caused by this form of proctitis.

Etiology. The causes of this disease are internal and external. Irritating diet, diseases in adjacent organs, pin-worms, impacted feces, foreign bodies in the rectum, and morbid secretions from the intestinal canal are among the internal causes. Sudden change of temperature when heated, improper closet material, injuries inflicted by violent scratching, improper use of the syringe or other violence, exposure of parts to the emanations from foul closets or privies, and the application of irritating substances in fissures or other minor ailments of the rectum may be mentioned as the most frequent external causes. Sodomy and pederasty are known causes without the development of venereal disease.

Treatment. The treatment of this form of disease, like that of all others, demands the removal of the cause, so far as possible. In many of the above enumerated causes, however, we may proceed with the treatment of the inflammation while we are removing them. The patient should, of course, be confined to bed. If he can be induced to take an anesthetic, his comfort will be greatly promoted by gently stretching the sphincters. In cases of impacted feces it is wonderful how spontaneously the bowel will relieve itself the moment the patient becomes unconscious. I think it is a most important point to avoid the violence to the parts consequent upon mining out these masses with a spoon handle or scoop.

The anesthetic not only evades abrasions and septic dangers, but saves the patient much suffering, and gives the surgeon opportunity for more thorough examination. After this stretching has been accomplished the treatment becomes one of local and sedative measures. If the parts are not too tender for introduction of the irrigator, the patient should be laid upon the side and a constant slowly flowing stream of hot or cold fluid passed through the rectum. It is impossible to tell whether cold or heat will be most grateful to a given case until it has been tried. This fluid may be simple water, or it may be medicated as follows: One per cent. carbolic acid, two per cent. boric acid, two per cent. thymol, one fourth per cent. nitrate of silver, five per cent. hydrastis or two per cent. tr. opii. These solutions should be selected according to the indications in each particular case. Where the irrigator can not be borne, sometimes two small, soft rubber catheters can be used, one for the flow and one for the waste-pipe. The fluid should be thoroughly drained off before the instrument is removed, and a soft suppository of opium, belladonna, and iodoform introduced.

I do not use enemata, because it seems to me they only increase the tenesmus and prevent the quiet which is sought. Sometimes a small enema of flaxseed tea, say f. ℥i, with about gr. ss–i ex. opii, or ♏xxx fluid extract krameriæ, will give great relief; but the quantity should never be large. Liquid, unirritating diet should be administered at regular intervals, and alcohol should be absolutely enjoined. When the acute stage has passed, astringent solutions may be varied and increased in their strength. Carbolic acid from ten per cent. to fifty per cent. has proved the most useful in my hands, although nitrate of silver, sulphate of copper, and sulpho-carbolate of zinc act very well. The main point is to keep the parts clean by allowing the bowels to move only at regular intervals and by frequent irrigation, and to retain the patient in a recumbent position until pus and blood have entirely ceased to be discharged. After this he may leave his bed, and, continuing his dietary regulations, may resume his usual occupations.

Hypertrophic proctitis may be either acute or chronic, and although I have termed it a primary disease, it is very frequently associated with gastro-intestinal catarrh—not so much as an

extension of the disease from above as an integral part of a general catarrh of the gastro-intestinal tract. It may, however, occur in the rectum first, and may be confined to this portion of the tract. As I have never had an opportunity to make a *post-mortem* upon one of these cases, it will be impossible to give a microscopic report upon its pathology. The macroscopic appearances though may be easily described.

In the acute form the tactile examination reveals very little beyond a soft and doughy feel of the mucous membrane and a somewhat closer approximation of the walls of the gut. The speculum shows, however, a swollen, edematous mucous membrane, which bulges out into the instrument wherever the fenestræ are open, paler than usual, and covered with a thin coat of whitish, tenacious secretion. There are few pus cells in this secretion at first, nor have I been able to establish any constant bacilli. The folds of the rectum are deeper than usual, and their edges lie closer together.

In the chronic form the edema subsides, leaving a pale, flabby mucous membrane, with deepened folds and a more profuse secretion of a stringy muco-pus. When the membrane is wiped off it has a cauliflower or condylomatous appearance, soft and granular. It rarely bleeds, and the end of a fine eye-probe may be pressed down between the whitish granulations. Scraping with a dull curette causes a muco-purulent fluid, such as is seen in the rectum, to exude from the mucous membrane. I conclude, therefore, that this granular appearance is produced by hypertrophy of Lieberkühn's follicles, and the hypersecretion is thus accounted for. In this form of proctitis ulceration within the rectum is very rare, unless there be some complication; but the acrid secretion which oozes out through the sphincters keeps the muco-cutaneous surface about the anus moist and irritated until it becomes excoriated and inflamed, and may be mistaken for moist eczema of the parts. Fissures between the anal fold may frequently be seen, but, as the sphincters are generally relaxed, they are not so painful as usual and rarely exhibit signs of acute inflammation. The feces in this form of proctitis are generally soft, and the inflammation seems to be continued by the irritation of its own discharge.

Symptoms. The acute form of the disease is attended with slight

elevation of temperature, symptoms of gastro-intestinal indigestion, dull, heavy pain about the anus and sacrum, retraction of the anus, and frequent desire to defecate. The capillaries and veins are not much dilated, and hemorrhoids are not often present. The stools are soft, often fluid, and mixed with a stringy muco-pus. Sometimes there is jaundice present, evincing the catarrhal involvement of the biliary duct. The tongue is coated, white, and flabby. This condition lasts for a week to ten days, and gradually drifts into the chronic state. The symptoms differ but little here from those first enumerated. The pain becomes less acute, rather the sensation of weight or bearing down in the rectum. The diarrhea persists and the stools contain more and more of the muco-pus, which grows thinner as the disease progresses. Excoriations, fissures, connective tissue, hemorrhoids, and condylomata develop about the muco-cutaneous border of the anus, and the patient may be compelled to wear a napkin or pad. With all this there is rarely any true ulceration or contraction of the caliber of the canal. The parts are not sensitive to the touch, and the speculum reveals the appearances detailed above.

Etiology. The causes of this form of proctitis are not clearly defined. It usually occurs in vitiated constitutions with hereditary catarrhal or tubercular tendencies. I have searched the discharges in vain for tubercle bacilli. Occasionally it may be traced to irritating ingesta or to sudden chill. I have seen one case in a flabby, hypochondriacal German without any other symptom of disease. The disease seems to be confined to the follicular layer of the mucous membrane. I have not seen the lymphoid nodules of the submucous layer enlarged or tender in it.

It probably has its origin in an irritation of Lieberkühn's follicles, with consequent acrid secretion and persistent hypertrophy of the same. Of course this explanation is purely hypothetical.

Treatment. The treatment of this form of the disease consists in regulating the digestion, secretions and excretions of the intestinal tract. It should be washed out with large draughts of hot water three or four times a day, and the rectum should be irrigated with a hot solution of boric acid or infusion of quassia. Every third day a two per cent. solution of nitrate of silver, a five per cent. solution of carbolic acid or some other stimulating

astringent should be swabbed over the mucous membrane of the rectum. All excess should be wiped off or washed away by irrigation. The external parts should be kept as clean as possible, and a drying powder of oxide of zinc and calomel, equal parts, applied frequently. Condylomata should be touched with monochlor. acetic acid. I do not consider it advisable to remove the connective tissue hemorrhoids until all discharge of pus has ceased. Tonics, codliver oil, and nourishing but easily assimilable diet should be persevered in, and patience exercised by both patient and physician, for though it is a tedious disease all the cases I have seen have recovered.

The atrophic form of this disease is always chronic. It presents to the touch a sensation of dryness and heat, and the walls of the gut do not appear to lie closely together. To the eye the mucous membrane is bright red, tense, and shining; it does not protrude itself into the fenestræ of the speculum, nor is it covered with any secretion, except it be here and there a little inspissated crust. The rugæ seem almost entirely obliterated, and little masses of hardened feces adhere to the walls of the gut; especially is this so in cases where there is a posterior rectocele. Here let me call attention to the advantages of the laryngeal mirror in examining these pouches and behind the folds of mucous membrane for ulcerated spots, arrested fecal masses, and foreign bodies, as I have not seen it mentioned elsewhere.

Ulceration is more frequent in this form than in the hypertrophic, but it is generally circumscribed, shallow, and does not tend to spread. It is more of an excoriation than of an ulceration, due to the passage of irritating feces over the dry and tender membrane. The feces are always hard and lumpy in this form of proctitis. The condition is likely to extend to the anal margin, and the dry, brittle condition of the mucous membrane at this point is the source of much suffering to the patient. There are frequent fissures and cracks which differ from those in the hypertrophic form, in that they occur regardless of the radial folds and are very painful. The mucous membrane is so dry and brittle that it cracks when the anus is stretched open, and pruritus is a constant symptom. Hemorrhoids are frequently associated with this form of the disease, but are the results, I believe, rather than the cause of the disease.

Symptoms. The patient complains of heat, burning, and sharp pains in the rectum. He is constipated; his stools, as said above, are hard, dry, and followed by much pain; sometimes there are pus and streaks of blood adhering to them, due to the cracking and consequent ulceration of the mucous membrane. The sphincters are closed, and the introduction of the finger is very uncomfortable if not positively painful. There may or may not be digestive troubles, but generally the patient feels quite well outside of his rectal trouble.

Etiology. This form of proctitis is so frequent in old, obscure syphilitic cases that I have come to suspect the disease in every case that I see. There have been a number in my clinical and private practice, however, which were, like Cæsar's wife, above suspicion, and I must conclude that there is another cause for it.

I am rather inclined to believe it is due to emanations from foul closet or privy gases and improper toilet material, for in most of the cases I can elicit some such exposure.

Treatment. The first thing to be accomplished in these cases is to regulate the bowels and relieve the rectum of the accumulation of dry, irritating feces. I find nothing to act so well in these cases as cascara sagrada alternated occasionally with podophyllin. The rectal and anal toilet should be carefully attended to, and the diet should be as free from excrementitious material as possible. The rectum should be irrigated with hot water once each day, to soften the epithelium and remove any adhering particles of fecal matter. A small quantity of glycerine or liquid vaseline should be introduced high up into the rectum twice a day. Albolene with one per cent. carbolic acid and one half per cent. menthol seems to act very well upon these cases. If there is any suspicion of specific disease, moderate doses of potassium iodide or mixed treatment should be persistently administered. Let us not forget, however, that the therapeutic test is almost valueless in specific disease of the rectum. The aim of treatment in this last form of proctitis is to soothe the inflammation and at the same time stimulate the follicles to their functional activity. It is a sort of contradictory task, but practical therapeutists can solve it.

The sphincters should be stretched and hemorrhoids removed in these cases without waiting for the inflammation to subside.

Touching the mucous membrane lightly with the actual cautery seems to have a good effect. By these means the fissures will be cured, and if the bowels are well regulated they will not return.

While these forms of proctitis resemble each other very much, nevertheless they are distinct, and careful discrimination between them is of the utmost importance in their management and prognosis. If we carefully eliminate them as etiological factors in the surgical diseases of the rectum, we will have more success in our operative work.

NEW YORK.

THE RÔLE OF THE SPHINCTER ANI IN RECTAL SURGERY.

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[Written for MATHEWS' MEDICAL QUARTERLY.]

Each time a rectal operation is performed the sphincter presents itself as a factor of importance. The operator must ask himself two questions: What effect will the sphincter have upon the operation? What effect will the operation have upon the sphincter? One sphincter at the beginning, two sphincters at the end; the first a wholly voluntary muscle, the last two partly voluntary, partly involuntary; voluntary muscle important, involuntary muscle very important; this is the manner in which nature has guarded the inlet and outlet of the alimentary canal. Sphincters as a rule are not entirely under control of volition, but only to a slight degree, otherwise one would be compelled to concentrate attention upon keeping the sphincter ani in a state of tonic contraction. Nature has wisely relieved us of this duty by establishing in the lumbar cord a reflex center to preside over this muscle. All the reflex functions of life are closely connected either with the very continuance of life itself or with the integrity of the function of the organ they guard; hence they are the last to yield to extraneous circumstances, and the first to regain a normal condition. Profound narcosis is necessary to relax the sphincter ani, and when the orbicularis refuses to respond to corneal

irritation anesthesia has been carried far enough, the confines of safety have been reached. While the function of the sphincter can not be said to be necessary to life, yet it is necessary to the function of the organ it guards, to the comfort and happiness of its possessor and to those with whom he associates, and to his usefulness in society. Therefore, with nature and social environment emphasizing its importance, it is not to be considered a strange thing if rectal surgeons have a profound respect for this little muscle, or a profound dread of the *bête noir* of rectal surgery, incontinence of gas and feces. Shall it be divided or shall it not be divided, shall it be divulsed or shall it not be divulsed, become very important questions viewed in the light of the above mentioned facts. They present problems that are often difficult to solve, and opportunity is offered for the display of the most intelligent judgment on the part of the operator. No rule can be laid down that will apply in every case, and it would be folly to attempt it. But, if in the course of an operation it becomes necessary to invade the integrity of the sphincter function, the same principles that govern the restoration of destroyed muscular functions in other parts of the body should be applied here. If the biceps be severed, the cut surfaces of the muscles are brought together. If the sphincter be cut, it should be treated in the same manner, its edges freshened, if necessary, and co-aptated, its continuity restored. This is even more urgent than in the case of the biceps, because the sphincter is circle-shaped, and, its completeness having once been destroyed, it has no fixed point from which to act. And then, too, the parts must be kept in position until healing has occurred. Position is one of the Surgical Trinity. Unless this is done the cicatrix may warp the wound area out of its proper relations. If the musculo-spiral nerve be severed by a fractured humerus, the muscles supplied by it will be paralyzed until union of the separated portions has occurred. The nerve supply of the sphincter must be intact if it is to perform its duty. It can not act without proper innervation.

But, when the question of preservation of function need not be considered, the influence of this fidgety little jailer upon the field of operation must not be lost sight of. Rest is a difficult thing to procure in the region of the rectum. There is no rest for the sphincter ani. "Eternal Vigilance" is its motto. And then, again,

the levator ani, as pointed out by Bodine, is a supernumerary muscle of respiration, and respiratory movements are transmitted by it to all the pelvic viscera. Rest is another one of the Surgical Trinity, and when wounds are healing by granulation is a very important help to rapid recovery. Most rectal wounds heal in this way. Hence it is that the after-treatment in rectal surgery is as important as the operation itself. Divulsion is often resorted to for the purpose of securing this much-needed rest. If it were possible to remove the sphincter before an operation and return it to its accustomed place after the restoration of the patient, our work would be wonderfully simplified; but, as it is impossible to do this, it behooves us to study well its relations to rectal disease. Experience, coupled with sound judgment, will do more to solve the problems raised by this "pesky" little muscle than any rules that can be formulated. Let us not deal with the sphincter in a purely routine manner, but individualize it in each operation.

St. Joseph, Mo.

SOME POINTS IN REGARD TO OPERATION FOR CANCER OF THE RECTUM.

BY EMORY LANPHEAR, M. D., PH. D.,

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[Written for Mathews' Medical Quarterly.]

There are some points relative to operation for cancer of the rectum that deserve more than passing notice. The first question to be settled upon discovery of cancerous disease of the rectum or sigmoid is: Can the growth be removed with a fair prospect of cure or even considerable prolongation of life? The answer to this can be made only after a preliminary laparotomy in cases of very marked extent. The abdomen should be opened in the left inguinal region, and careful exploration made to determine whether or not there be secondary deposits so high as to prohibit removal. If the disease be found to be too far advanced for an attempt at radical cure, inguinal colotomy should always be done, as it adds greatly to the comfort of the patient, prolonging life and preventing disagreeable symptoms almost certain to arise late in the history of the case.

If examination shows the malignant disease not too widespread for removal, the second question which the surgeon must discuss is: Shall a preliminary colotomy be made, or shall the bowel be brought down and stitched to the perineum after the radical operation? Each case must be decided upon its own merits; but as a rule it may be said that if the cancer does not involve the rectal and perirectal tissues nearer than one inch to the external sphincter, and if the disease does not extend upward more than four inches, resection of the bowel is to be selected rather than inguinal colotomy, as in many instances of early operation a perfect sphincteric control may be secured by bringing the bowel down and joining it to the portion just above the anus, the discomforts of an artificial anus being thus avoided.

But unfortunately too many cases have progressed too far for the ideal operation, and colotomy must be done as a preliminary to extirpation. How should this be performed? The method which I have practiced in a number of cases varies somewhat from the classical operation of bringing up the bowel, stitching it into the wound, and opening the side of the gut; this I reserve for cases where I am certain that there will be a subsequent restoration of the natural channel (stricture, etc.). The mode of procedure is as follows: the abdomen and hands having been prepared as carefully as for any other laparotomy, an incision of about two and a half inches is made some two inches above and parallel to Poupart's ligament. The cut is made to the peritoneum, when an assistant introduces a steel sound or catheter into the rectum and sigmoid. The peritoneum is then opened and caught by hemostatic forceps, since retraction is sometimes quite troublesome in this locality. Two fingers are introduced and the end of the sound located quickly, then slipped upward along the sigmoid flexure until a point is reached that can be pulled into the opening; the nearer the rectum the better. The gut is drawn out and gauze packed around it and into the opening. The meso-colon or the connective tissue behind the colon is punctured with the fingers, a strong silk thread thrown around the intestine, drawn tightly and tied, the ends being left long. The bowel is cut squarely across with scissors, bleeding vessels are ligated with catgut, and the end of the upper part of the sigmoid with its attached string enveloped in gauze. The lower end

is inverted and musculosa sewed to musculosa with four or five interrupted silk sutures, and then serosa brought in contact with serosa by means of the Lembert stitch with milliner's silk and a fine cambric needle, thus completely burying the first row. The end is carefully washed and dropped into the pelvis. With fine catgut the parietal peritoneum is sewed to that covering the colon, about an inch above the encircling ligature, six or eight stitches being sufficient. The wound above and below the bowel is closed with silk-worm gut, allowance being made for contraction of the scar. The gauze heretofore covering the upper end of the colon is now removed and traction made on the string, a large quantity of iodoform dusted on the wound and the protruding bowel, and much gauze applied around it; a piece of oiled silk is split in its middle to permit the passage of the end of the colon and applied over the gauze. Nothing can now be seen except the end of the gut with its thread; this is cleaned, surrounded by iodoform gauze, and covered by cotton. The advantage in leaving the string tied around the colon is that no peritonitis nor wound infection can occur from descending contents of the bowel. In thirty-six hours there will be agglutination of the margins of the wound, and infection is not likely to occur if accumulation of gas necessitates clipping of the ligature; but this should be delayed until the end of the second day if possible, and then great care exercised to prevent contamination of the subjacent wound. The outer dressing must be changed frequently, but that under the oiled silk need not be disturbed until the eighth day, when primary union will usually be found to have taken place, and the stitches can be removed. In two or three weeks a little cocaine can be applied, and the redundant bowel cut away to the level of the skin. While this operation requires some skill, marked delicacy, and much care, it is decidedly the best yet described, and should give one hundred per cent. recoveries if the surgeon is particular in details of asepsis.

As to the mode of attack for removal of the malignant disease there can be no doubt of the superiority of the Kraske operation over all others. Yet there are some modifications that I have found decidedly useful. In the first place, while the lower part of the sacrum does interfere to a marked degree with one's manipulations high up, removal of more than the coccyx and the

lowest sacral vertebra can be avoided by making an incision of some extent in the perineum; disastrous results (like huge sloughs and gangrene) have occurred when the sacrum has been broken, as advised by Kraske. In the female I first remove the bone and pack the wound with gauze; then split the perineum from the fourchette to the margin of the anus, extending the cut up the posterior vaginal wall nearly to the *cul-de-sac* of Douglas. The vaginal mucous membrane is carefully dissected off on both sides and held up out of the way by tenacula. The incision is then extended around the anus (on both sides if complete removal is to be effected) until it joins the cut over the coccyx. In the male a staff is introduced into the urethra and the cut made through the perineum to as near the urethra and the prostate as is compatible with safety. The rectum and its tumor are thus rapidly dissected out by the fingers, assisted now and then by blunt-pointed scissors. When the peritoneum is reached the whole field of operation is very carefully cleaned and the peritoneum cautiously opened, its margin caught in hemostatic forceps to prevent disappearance, and the bowel drawn strongly down. When healthy gut has been reached, and a full inch allowed for inversion, a clamp is applied to the sigmoid, gauze packed into the opening in the peritoneum, and the gut cut squarely across. As soon as the rectum is removed the small portion of sigmoid remaining between the colotomy and the severed lower end—not more than one to three inches—is washed out, the lower end inverted just as was the upper, and musculosa sewed to musculosa. No trouble will be experienced in doing this, but the application of the Lembert stitch is very difficult in the limited space; however, with a curved needle serous coat can be brought into contact with serous coat by a continuous "over and over" stitch of finest silk, which answers as well as the Lembert, as no feces are to pass along the small remnant of gut. When the end is sewed and washed the gauze is removed and the bowel pushed back into the pelvis where it soon atrophies. The peritoneum in front is quickly sewed to the peritoneum behind, thus shutting off the abdominal cavity.

The method of closing the remaining wound must vary according to the sex of the patient and extent of the cavity. In the female I prefer to join the vaginal mucous membrane with catgut,

and then sew up the perineum with silk-worm gut, just as in an ordinary perineorrhaphy, with a few stitches to close the wound above the coccyx, iodoform gauze being stuffed into the cavity, which must fill with granulations. I can conceive of a case in which it might be necessary to turn the vaginal membrane back to cover the large denuded surface; but such a closure would be objectionable as destroying the normal support of the pelvic floor, and rendering the subsequent history unsatisfactory. Healing of the perineum by primary union can nearly always be obtained, and three or four weeks will see the cavity entirely filled with granulations without suppuration, so the necessity for the second method will be very rare.

In the male the anterior cut must be brought carefully together with silk-worm gut stitches very closely inserted, the incision behind closed up to the point of packing, and the most scrupulous care exercised as to asepsis in the first as well as all subsequent dressings.

In cases of cancer involving only the upper part of the rectum and sigmoid (very rare) removal can be effected from above with comparative ease by putting the patient in the Trendelenberg posture; no stump would remain, as when done from below.

As thus performed, including the preparatory colotomy, removal of cancer of the rectum does not require more than six weeks in bed, and can be done by any surgeon who thoroughly understands the anatomical relations of the parts involved.

Of course, when the neoplasm does not extend sufficiently high to prevent, the ideal operation is to cut the rectum across a little above the sphincter, dissect out the rectum and tumor, cut off the gut above the diseased portion, and join the upper end of the bowel to the lower by means of a Murphy's button, reinforced on either side by a few sutures in the connective tissue, securing healing by primary union when possible; but cases in which this can be done are not numerous, whereas advanced cancer of the rectum quite frequently comes under the care of the surgeon; these are the cases that can always be benefited and sometimes cured by the operation just advocated.

Kansas City, Mo.

OPERATIVE TECHNIQUE IN CLASSIFIED CASES OF HEMORRHOIDS WITH A NEW AND SAFE METHOD OF INJECTION.

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Some years ago I claimed that the varying gravity of the lesion and the condition of the patient with reference to habits, position, and business relations made it desirable to intelligently classify hemorrhoidal cases and apply that operative plan which offers the patient the most secure, prompt, and radical relief.

The *first* variety of *external* hemorrhoids considered here is the one due to extravasation, and sometimes coagulation of the blood under the delicate cuticle near the anal orifice. The surface of this hard, bluish tumor, shot-like to the touch, can be so benumbed by ice and the cutaneous injection of a four per cent. carbolated cocaine solution that the apex can be grasped by a clamp and an ellipse removed with curved scissors. The cut should be made in the direction of the anal folds; the clot is then turned out and a pledget of aseptic gauze applied to the wound. The advantage of this method over simple incision with a bistoury is that immediate union of the edges of the wound is averted.

The history of this tumor, when unmolested, is one of recurring exacerbations which result in plastic formations and the development of the *second* variety of *external* hemorrhoids, viz., a tegumentary fold, which, from attrition, congestion, and inflamtion, causes great inconvenience. Ice and cocaine allow of a painless removal of these tags. The incision should be made with the scalpel directed along either side of the base of the tumor and in the direction of the anal folds, hemorrhage being controlled by hot sublimate solution; the edges of the wound are carefully approximated with catgut sutures. A firm aseptic dressing adds to the patient's comfort after the operation. The only remaining *external* condition demanding attention is what is known as *condylomata*, a term which applies to a papillary growth differing from the preceding in that the tumor is more peduncu-

lated and more epithelial in character; the follicles are hypertrophied, and the attrition usually provokes an ulcerative condition of the growth. Some grave lesion usually attends this condition, and search should therefore be made for stricture of the rectum, ulceration, or syphilis. The local condition is amenable to scrupulous cleanliness and the application of a bland powder.

A condition of mixed *internal* and *external* hemorrhoids is sometimes perplexing in that it is not always easy to select the most appropriate operative plan, and it is a fact that writers on the subject have not given attention to this combination. The patient gives a history of protrusion at stool, occasional loss of blood, mucus discharge, and pain more or less constant in intensity and location. Exacerbations come with some irregularity of habits, and palliation, including rest, aperients, frequent ablutions in cold water, regulation of diet, and the application of a sedative ointment are not curative, and I shall describe the *ligature* operation as the most appropriate in this class.

Under general anesthesia the finger should be pushed above the internal sphincter, and divulsion slowly made by pulling downward and outward in order to more effectually paralyze the levator ani, since it is spasm of this muscle that mainly causes the intermittent pain which follows any movement of the patient. The mixed hemorrhoid demands that a sulcus be cut at the mucocutaneous junction, and when the pile is large the sulcus should completely encircle the base.

A Peasley's needle armed with large braided silk is introduced in the sulcus and carried well down to the base of the tumor, then through the base, and brought out at the inner aspect of the tumor to the tip of the left index finger, care being exercised that no fibers of the sphincter are included in the ligature. The ligature being cut and the needle being withdrawn, the ends are made to embrace one another by throwing the left over and bringing it back under the right. This being done on either side of the base the tumor is constricted *en masse*, when the ligature is lightly tied, and any hemorrhage which might follow transfixing a central vessel is controlled. After the ligature has been tied the apex of the tumor should be grasped and about one third of the mass removed, a step which will relieve tension and throb-

bing and allow of an easy return of the mass into the bowel. The external part of the tumor is excised after the manner described for the second variety of external hemorrhoids. I prefer the ligature in the above class of cases, because it is not painless to apply a clamp and cautery to a muco-cutaneous surface; it is not easy to regulate contraction when the cautery is used on mixed tumors, and the cautery does not always leave a permanently sealed aseptic surface, for the reason that the opposed actions of the contracting sphincter and levator muscles tend to open the cauterized wound and lead to a painful marginal ulcer or fistula.

The *diffuse* pile, purely internal, offers the classified indication for the *clamp* and *cautery*. Complete divulsion of the sphincter and eversion of the pile is necessary, and the clamp should not expose more than one half of the tumor for cauterization.

The case of long-standing trouble with a large connective tissue formation and constant protrusion belongs to the class ill suited to the ligature or to the clamp operation, and comes under the domain of Whitehead's plan. The detachment of the mucous membrane over the sphincter demands care, in that the fibers of the sphincter must not be molested, and when the pile area is removed the apposition of the lowered mucous membrane to the skin must be accurate, for primary union is imperative. For this plan good assistants and from thirty to sixty minutes are necessary, but a success means almost no subsequent pain and a very radical result.

Very delicate ground is approached in defining the class in which the plan of *injection* is to be recommended in this article, but the following technique, which I have never seen recommended, possesses, in my judgment, a positive merit, and takes a good place among the legitimate and positively safe operative procedures. In that class of internal piles which causes marked distress on account of recurring hemorrhage, ulceration, or acute exacerbations with pain in the subject, furthermore, with weak arteries, or a heart or kidney lesion contra-indicating the use of general anesthesia, or in the subject to whom loss of even four or five days is almost impossible; or finally, in the patient advanced in years with pronounced misgivings about anesthesia and operations, I dilate the sphincter under hypodermic and topical cocainization and expose the tumor. The surface of the pile and anal

mucous membrane now being made aseptic and anesthetic, a ligature is thrown around the base of the tumor and snugly tied, only the first half of the reef-knot being completed. The tumor is now temporarily constricted at the base, and it stands out as a pedunculated, well-outlined tumor, and offers more resistance to the puncture of the needle and facilitates the deposit of the solution in the center of the pile, and localizes the cauterizing influence of the selected solution.

In about one minute the temporary ligature is removed and the needle withdrawn. These steps may be repeated until two or three tumors are injected, and if a greater number exist it is wise to complete the operation at a second or third seance. In case a pile is situated high up in the rectum, and is therefore difficult to expose, a fenestrated speculum may be used, engaging the tumor in the fenestrum and temporarily constricting its base by pressure on the slide.

The following advantages are claimed for this plan :

Exact localization of the cauterant is gained by the constriction of the base and by the resistance which the tumor affords to the needle, therefore the effects of an injection too deeply or too superficially made are overcome.

My method is to deposit from three to five drops of the following solution into the center of the tumor :

Acidi carb	℥iss;
Sodæ bicarb	℥ss;
Acidi salicylici	℥ss;
Glycerinæ	℥ss;
Aq. dest., q. s.	℥j.

After-treatment. When the patient is not constipated I do not employ the preliminary purge, but on the evening before the operation I administer an opiate in order to lessen peristalsis and avoid evacuations during or after the operation. Thorough cleansing of the mucous membrane of the lower part of the rectum is practiced and a gauze dam placed above the site of the operation.

I usually insert the tampon-canula (or gauze-covered rubber tube three inches long) into the bowel in order to secure asepsis during the forty-eight hours after the operation, and to allow the escape of flatus.

At the end of the second day a saline is given in hourly doses,

and when the desire to evacuate is felt an injection of water, followed by boroglyceride, is made through the tube. The tube then passes and the boroglyceride temporarily protects the surface of the bowel, and a subsequent carbolized irrigation or sponging completes the aseptic details. Normal diet and regulation of bowels is then resumed.

Patients are out of bed on the third day, and out of the room in a week, when the ligature has been employed.

Catheterization is practically unknown, pain is not severe, and sepsis not encountered in the treatment of this trouble when the details are carefully carried out and the cases properly classified. No loss of time is necessary when the injection is made over the temporary ligature.

OMAHA, NEB.

A PLEA FOR MORE FREQUENT AND EARLIER COLOTOMY IN PAINFUL MALIGNANT DISEASE OF THE RECTUM.

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The most signal advance in the surgery of the rectum of late years is the doing away with the idea that intestinal obstruction is the only indication for colotomy. In fact the indications are varied and many. In the last decade surgery of the rectum has made great progress, and especially in the treatment of malignant diseases. From a surgical aspect the various countries differ as to what the treatment shall be. England, so noted for her conservatism in every thing, and surgery as well, has come to treat most of her cases of malignant diseases by making an inguinal colotomy, save in the very limited number of cases where an excision is indicated, that is to say, where the contiguous tissues are not as yet involved. They seldom make a Kraske, and rarely or never make a full-fledged one, holding in the vast majority of cases that an inguinal colotomy meets every indica-

tion for which an operation is made, and that too with much less risk to life than a Kraske or any modification of it. Surely no better evidence could be produced for the making of an operation than the fact that the English surgeons advocate and make it. And further, that there is a consensus of opinion not only among themselves but among the continental surgeons as well, that the majority of cancerous cases should be early colotomized. Inguinal colotomy is always advised at St. Mark's Hospital, London. There have been more colotomies made in that institution than any other hospital of any other country, and the results have been carefully studied and noted by Mr. Allingham, jr., who has become the champion of this operation. Mr. Bryant says that the operation has been too much regarded as a *dernier ressort*, and as a consequence was only carried out when all other measures had been tried and proved to be useless, and that he wishes to combat this idea and favor its earlier and more frequent performance.

I will state in a concise way the reasons for making a colotomy. First, it is the greatest modern surgical relief measure, inasmuch as it completely does away with the function of the rectum, thereby relieving the intense pain caused by defecation. Pain is an inevitable result in advanced malignant disease of the rectum. There are a few exceptional cases which only prove the rule. Second, the lease of life is extended. There are instances where it has been considerably extended. So great authority as Cripps, Allingham, and Eiselsberg claim to have extended the lease for weeks or months. Are not these most cogent reasons for making a colotomy? Third, the risk of the operation has been minimized. When abroad I interested myself in collecting some statistics on this subject, which are as follows: Allingham has made sixty-eight colotomies with two deaths only, and they were total obstruction cases. Cripps has made forty-five with one death only; this also was a total obstruction case. Edwards has made sixteen with one death; patient was very septic at the time of the operation. Reeves has made sixty-five without a death. Goodsall has made twenty-two without a death. These statistics show a death-rate of less than two per cent. In fact I might say safely that, had the operation been made earlier in the total obstruction cases, there would not have been but one death

recorded in more than two hundred colotomies. So, by making an early colotomy, the death-rate may be and will be less than one per cent. In arguing thus for colotomy in preference to excision in some cases, though not by any means in all, I am appealing to those who have made colotomies and know what are the results. To those who have not made the operation, or those not familiar with its results, this argument may have some influence, but to those who say they believe it inflicts an internal deformity, worse than the torments of the damned or death, it can be of no force whatever. I confess to having had a strong prejudice against it myself, and it was only overcome by an investigation prolonged and painstaking. Let us note carefully the indications. It is only advised with one condition, that is, where nothing else can be done—cancers that can not be extirpated *in toto*. We do not favor colotomy to the exclusion of other procedures; and if we do it more often than the general surgeon it is for the reason we know from abundant observation the immense amount of relief it is sure to give, and therefore we are anxious to give that relief as soon as possible.

Kelsey makes a strong case when he says, "If colotomy will put thirty pounds of flesh on a cancerous patient and cause such an amount of relief to his local symptoms as to make him believe himself entirely cured; if by removing the chief cause of local irritation it will tend to retard the inevitable increase in growth, and if the artificial anus is not a cause of mental or physical annoyance, why delay giving the patient the advantage of it at once, and why put off an operation with less than one per cent. mortality until in the midst of intestinal obstruction the mortality becomes thirty or fifty per cent.?"

In looking over the current literature of the past year, there have been a number of articles, especially those by Allingham, Edwards, and Kappeler on colotomy, and all drifting in the same direction. Germany is well known for her progressive and brilliant surgery. Among the achievements of her latter-day surgeons Kraske's work stands out in bold relief; his operation for the removal of the rectum for cancer has now a well-established place as a surgical procedure. The Germans have indeed been slow to see the very great advantage of the colotomy method of treatment, especially in cancer. They have led the surgical

world in excision, and as certainly England and America have led her in colotomy. It is now known that a Kraske's or any of its modifications is not nearly so often made as formerly, that is, the limit has become more and more defined in German practice, and with the result that colotomy is much more frequent. The solution of the matter can and will be made by a fair and unprejudiced comparison of results by scientific inquiry; neither the one nor the other method will be abandoned. It only remains for us to ascertain which holds out the better prospect of relief in any given case. In some it will be a Kraske or some of its modifications, in others colotomy; and before another half decade has passed I believe that the general rules laid down for selecting the method of treatment will be generally agreed upon throughout the surgical world. I think it safe to say that colotomy in the near future will be made earlier and more often, for the reasons, to recapitulate: first, it extends the lease on life, and second, it makes life tolerable. To me this is an established fact, a demonstrated verity.

St. Louis, Mo.

FISSURE OF THE ANUS AND PAINFUL EROSION OF THE RECTUM IN INFANTS AND CHILDREN.

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[Written for MATHEWS' MEDICAL QUARTERLY.]

If the frequency of anal fissure in infants and children is a matter of discussion, there can be but little doubt that its presence is frequently overlooked. We certainly have very often presented to us little patients who suffer from an inordinate constipation. In a vast number of these cases a fissure of the anus is the perpetuating cause of a very baffling condition. Parents of such infants or children will not infrequently tell us that up to a certain time the patient had one movement, although a constipated and unsatisfactory one, daily. This ceased to be the case, and three or four days would elapse and then only a hard, dry movement accompanied by evidences of great pain would occur.

Even these delayed dejections are characterized as unsatisfactory, not being moist or abundant. If, in all such cases of inordinate constipation, we should pursue a course to be mapped out in this short communication, we would be gratified by a disappearance both of the constipation and the unfavorable symptoms in a short period of time.

Anal fissures, not considering erosions, in infants and children may be present, single or multiple, visible below the anal ring, or they may be confined to a region above the ring and thus escape notice. When below the ring the fissures are frequently multiple. We see, upon pressing open the nates, a number of minute longitudinal wounds, which bleed easily and give the impression at first that we have caused the tears exposed to our view. Upon closer examination, however, it will be found that the whole anal region is slightly excoriated, and that these longitudinal solutions of continuity are filled with feces and were evidently present before the examination. One or two of these fissures will extend up into and above the plane of the ring. This larger and deeper fissure will also be found soiled with feces; its borders are hard and painful. As soon as investigation is attempted a spasm of the anal ring occurs, and the great pain evinced in the struggles and cries of the little ones causes us to desist from further efforts at examination. The cases above described are not so infrequent, but the writer wishes to emphasize that though typical they are exceptions.

The writer is convinced that more frequent than the above are a set of cases in which a careful and most painstaking examination, of course without an anesthetic, as is pursued in the first examination at the clinic, fails to reveal the presence of a fissure of any kind. Flattening out the folds of the anus forcibly or the introduction of a Sims rectal speculum fails to reveal the classical fissure. It is this class of cases to which the attention of the reader is especially directed in this article. In other words, only full and forcible dilatation of the sphincter under an anesthetic will expose these fissures alone. They are then found to be so small as to raise the question whether we have had to deal with a true fissure or an erosion above or near the anal ring, which when exposed looks rather insignificant, and seems to question the justifiableness of our operative procedure. We retire,

convinced that there was no actual fissure as we had understood it hitherto. In these cases, however, all symptoms disappear with operation, never to recur. It may be that in these cases we have to deal with a painful erosion of the mucous membrane of the rectum which, though it never attains the dignity of a well-defined fissure, still is as painful as the classical fissure. We have an analogous condition in the small, so-called painful ulcer of the leg.

The third set of cases of anal fissure in infants are those in which anal spasm prevents our seeing them without the aid of the speculum. With instrumental aid we find a typical granulation fissure extending from above the ring along the rectum to a variable distance. These cases are also as uncommon as the first set, at least in infants. In the third set the anal region before the introduction of a speculum may appear in an absolutely normal state. There is no suggestion of trouble here. Full surgical dilatation reveals the trouble higher up.

Etiology. It is not the intention of the writer to consider that condition of erosions and fissures of the anal region which accompanies the neglected or pronounced cases of congenital syphilis. It is assumed that such conditions belong in a class by themselves. We must simply note that in all cases of fissure congenital or acquired syphilis must be excluded, and if present must be considered in our treatment.

Constipation. Though by a queer fate these fissures of the anus of all grades are the cause of and perpetuate constipation to an inordinate degree, yet the fissures are caused by the very condition they perpetuate. These sufferers have been the victims of constipation long before the appearance of the anal fissure. These infants may be breast-fed, and the mothers may suffer from constipation. In other words, there is in these cases a congenital gift from mother to offspring. These breast-fed children are in every other respect in the best of health, in fact model babies, yet they suffer from constipation. In these cases we may have a congenital insufficiency of the muscular coat of the gut, or a deficient secretion of physiological fluids in the mucous coat of the gut, or the milk of such a mother is deficient in some ingredient which in other children serves to keep the evacuations of the intestine at the normal standard. Many of these infants are

not only constipated, but suffer severely from flatulence. They have frequent and severe attacks of colic. We know that many such flatulent babies do not produce in their stomachs a sufficient amount of acid, either hydrochloric or lactic acid, to accomplish all the objects of normal digestion of the mother's milk and prevent those bacterial changes which result in the production of stomach and intestinal gases. The food is not prepared in the stomach for its further digestion in the gut, therefore the subsequent inadequacy. Since the introduction of sterilized milk, whether the milk has been partially sterilized at a low temperature or completely sterilized at a high temperature, we meet constipation in infants more than ever. The feces are formed into dry, ill-smelling masses, much like that seen in the lower animals. In one case of the writer's the dejecta showed hard, small, marble-like masses or oval, bean-like masses. These artificially fed infants are not all constipated, but the proportion among them is larger than among the breast-fed infants. These infants retain the constipated habit even when they attain the age at which they can take whole milk.

They show this constipation with the Soxhlet method of feeding by dilution with sugar of milk. (*Münchener Med. Wochen.*, 1893.) In the latter method the infant's food is brought to a composition closely approximating the chemical composition of mother's milk. For the past two summers the writer has made use of this method of feeding infants, and still meets as many constipations as before. The assumption that heating the milk in some way eliminates elements from the milk which favor the evacuative functions of the bowel is not borne out by facts. Children taking the so-called Pasteurized milk, and even, as stated, breast-fed infants, suffer from constipation. Infants who at first were artificially fed, say up to the third month, and under a diet of sterilized milk suffered from flatulence and constipation, have under my observation lost their flatulence but retained an inordinate habit of constipation under a breast diet, which in every way was excellent in other results. This matter thus will repay further study. Constipated masses distend the sphincter to an excessive degree, and by mechanical insult cause a laceration of the delicate mucous membrane; these lacerations are perpetuated by the constipation, they grow larger,

become granulating surfaces which are bathed in the intestinal contents. At every attempted healing the dilatation of the sphincter tears the edges apart. We have thus also bleeding and pain at each movement. The infant, knowing instinctively that each movement of the bowel is accompanied by pain, will develop the habit of retaining the intestinal contents for days.

Thus in cases of fissure of the anus in infants and children the most striking symptoms are inordinate constipation, pain at movement, and bleeding with the movements. In one little patient, brought up on sterilized milk, aged two years, in the practice of the writer, the constipation dated from early infancy. The constipation at first was simple, only one movement occurring every three or four days. After a while the movements became even less frequent, hard, and dry. At each movement the pain was so extreme as to cause the little fellow to cry out piteously and hold on to a chair or something for support. In this case several examinations failed to reveal the presence of a fissure.

If we obtain a history, such as above, of inordinate constipation and pain, the diagnosis of fissure can be safely made, even though the fissure be not visible to ordinary examination with or without a speculum. In these cases operative procedure cures not only the fissure but the troublesome constipation.

The bleeding which occurs at each movement is in the form of a streaking of the dejections with blood. There is no such profuse bleeding as is met in cases of rectal polypus.

Diagnosis in all these cases is not difficult, if we will only think of the probable presence of a fissure and have the courage to proceed upon such a diagnosis, even though, as hinted above, the fissure be not located before actual operation.

Treatment. In most text-books upon diseases of children the measures advocated are dilatory, and vary from the touching of these fissures with silver to dilatation with one or two fingers, or even forcible dilatation without an anesthetic. All these hints carry with them an air of uncertainty which in practice only aggravates matters. We can not see how a skilled pediatrician can advise the full dilatation of the anal sphincter without an anesthetic. A more painful procedure it would be difficult to name. Why subject an infant to pain because it can not successfully resist? The operation adopted in four of the writer's cases

is as follows: Chloroform is administered, and when anesthesia is complete the Sims rectal speculum is passed into the rectum. The parts having first been cleansed with soap and brush, a full-sized speculum is used, an exploratory view of the lower bowel being thus obtained. If no growth, such as a polypus, be present, the speculum is withdrawn and the anal ring (sphincter) is thoroughly stretched with both thumbs, both in an antero-posterior and transverse direction. The fissure is burnt with a Paquelin cautery in its longitudinal diameter; a tampon of cotton may now be inserted high up so as to support the bowel. The operation lasts but a few minutes and there is no after-treatment with opium.

The patient during the operation is placed on the back on a hard table with a pillow beneath the buttocks; the thighs are held by the assistant up against the abdomen. The tampon is removed after twenty-four hours. The parts are sometimes excoriated from the effects of the above manipulations. In these cases a ten per cent. ointment of resorcin is of value, applied twice daily, both for its antiseptic and apparently local anesthetic effects. In no case of the writer's did the bowel descend through the anal ring after operation. No dosing with opium to restrain the intestinal movements has been found necessary. The recovery in all cases was complete and lasting. The constipation disappeared also with the return of the sphincters to the normal condition.

Prophylaxis. An article such as this could not be closed without a few hints upon the treatment of mild forms of constipation in infants and children, and the prevention of fissure by the avoidance of certain deleterious methods of therapy.

Henoch advises in cases of constipation in infancy a change of diet from a milk to a mixed diet. This is applicable to older children and infants whose dentition is well under way. In children below a year of age other things must be thought of. A mixed diet is only applicable in milder forms of constipation. In these forms we exclude the farinacea and starches, curtail the milk, which in cold weather may be administered in the form of unsterilized cream or cream and milk equal parts. In young children we sterilize the milk in warm weather according to the author's method of 87° to 90° Celsius.

Senna in electuary form is advised by Henoch for the medicinal treatment of constipation. He says there is no griping. It is just the fear of this which has deterred the writer from using senna.

The writer has found that by far the most useful drug in the treatment of constipation of the ordinary type has been the fluid extract of cascara sagrada. The dose for an infant below six months of age is ten minims taken at night in some agreeable elixir or syrup. Older infants may take even as much as thirty minims without ill effects, such as vomiting.

The introduction into the rectum of suppositories of soap, cocoa butter, or glycerine as an habitual practice, is to be strongly deprecated for the same reason as are habitual injections. The use of suppositories or injections causes excoriation and also eventually fissures. In saying this the writer is conscious of the fact that the use of the above remedies is sanctioned by some experienced men, but the writer can only see harm in allowing the average nurse or mother to thus habitually treat the infant. In one case the author is certain the hard nozzle of the syringe only aggravated if it did not cause the fissure.

The administration of drugs to the nurse or mother in the case of breast-fed infants, in order that the milk may become the vehicle of the drug, has not met with success in the writer's hands. It has only upset the normal functions of both nurse and child.

Certain infants suffer from painful excoriations about the anus even in the form of a painful chronic or subacute eczema. In these cases there are any number of minute fissures in the anal folds. This condition, if neglected, the writer thinks may well give rise to serious fissure. In these cases the acidity of the movements seems to be at fault. The infant should have its diet corrected, and, if necessary, have some drug, such as bismuth, which is excellent, in sufficient quantity for a few days to correct the error of intestinal changes. The local eczema or intertrigo is best treated with resorcin ointment, ten per cent. This is applied to the parts three times daily. As soon as it is applied it is again wiped off, leaving the parts simply well moistened; the parts are then dusted with oxide of zinc which has been very finely ground in a mortar to eliminate the gritty particles. The excess of oxide of zinc must be blown off the parts as soon as applied, else it will become an irritant if allowed to cake. In this way, carefully applied three times daily, these remedies will cause a troublesome anal eczema soon to disappear.

NEW YORK.

APPENDICITIS.

BY F. BYRON ROBINSON, B.S., M.D.,

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[Written for MATHEWS' MEDICAL QUARTERLY.]

Sixty years ago Albers, of Bonn, styled the assemblage of clinical symptoms peculiar to the right iliac fossa as *typhlitis*. He attributed the diseased symptoms to the cecum. Albers' opinions prevailed for three-score years, and made the cecum guilty of an unfounded charge.

Sixty years ago Melier, of Paris, attributed the morbid symptoms peculiar to the right iliac fossa to the *appendix*. Melier said the cause of the disease was found in the appendix. He went so far as to say that if we could diagnose the disease with certainty that it was possible to cure it with an operation. Prophetically he wrote, "We shall perhaps some day arrive at this result," that is, the operation.

Thus for sixty years two views were held by medical men, Albers' *typhlitis* and Melier's *appendicitis*. The majority of physicians allied themselves during these two generations to Albers' views. The views of Melier lay almost buried in oblivion, with scarcely an adherent or advocate until a few short years ago. Pathological anatomy, which alone satisfies logical surgeons, declares that the assemblage of morbid symptoms peculiar to the right iliac fossa is the *appendicitis* of to-day. All morbid disturbances of the right iliac fossa do not lie in the appendix, but it is fairly safe to say that ninety-five per cent. do.

The *etiology* of appendicitis is not fully known, as we can not analyze ultimate ideas. Appendicitis rather depends on a complication of causes:

1. The great majority of appendicitis depends on the presence of a *foreign body* in the appendix. This foreign body in the most cases is a *fecal concretion*. In a minor number of cases it is a foreign body which has been swallowed and resisted the digestive fluids. The foreign body only plays a relatively minor rôle, as microbes finish the story. The foreign body obstructs the outlet

of the appendix. The irritation enhances glandular secretion and distends the appendicular lumen. Microbes, which under normal condition are harmless, now assume pathogenic multiplication. The deranged appendicular glandular secretion produces its own bed of destruction. The foreign body lodges in the base of the appendix, and by its compression induces edema and deranged appendicular circulation, especially the venous and lymphatic portion. With deranged vascular supply the elements of the appendicular wall are devitalized, and such condition favors microbic invasion and destruction, ending rapidly in necrosis, perforation, or gangrene. The foreign body, whether it be scybala or indigestible matter, simply leads the way to microbic invasion. It is, then, *infection* that is at the bottom of suppurative appendicitis. It seems to me that the infection, microbe, or its product (ptomaine), frequently passes through the appendicular wall without (visible) perforation, but inducing peri-appendicular exudates. I consider I have observed this clinical fact many times in regard to other portions of the gut, for instance, where we find a long piece of bowel adherent to an abdominal tumor. Such pathological facts appear to me to explain why so many cases of undoubted appendicitis recover without operative measures. Absorption of products occurs; even pus will absorb. Appendicitis is then chiefly induced by the foreign body, soluble or insoluble, which carries on pathological processes by the aid of microbes.

2. A second significant cause of appendicitis is the condition of the *mouth* of the appendix. The mouth of the appendix is guarded by a fold of mucous membrane. It has been designated Gerlach's valve. I have noted this valve in many bodies. It varies very much. But the essential anatomical variation is that of a *large* or *small* mouth. The appendicular mouth in general appears to me smaller in male than in female bodies. If the mouth is small, as it is in males, a foreign body gradually works its way into the appendix, but with a small mouth it is difficult for the body to get out. The irritation accompanying the body aids in producing edema or swelling of the valve at the entrance of the appendix, and in this manner the concretion is soon surrounded by the closed appendicular sac. Glandular secretion increases and microbes multiply until the walls are invaded to

destruction by microbes. But if the mouth of the appendix is large the foreign body enters the appendix, and it can be easily expelled with no traces save a little appendicular colic. It seems to me that the size of the appendicular mouth explains why four times as many men have appendicitis as women.

3. Without prolonging discussion one can not attribute appendicitis to either *constipation* or *diarrhea*.

4. *Chronic colitis* seems to me to offer a reasonable explanation for appendicitis. As stated above, most appendicitis was due to a foreign body in the appendix, and that foreign body is mostly a fecal concretion. Now, so far as the author observes, nothing induces so much fecal concretion as chronic colitis.

5. *Tuberculosis* induces appendicitis, but only as a general disease of the digestive tract. It produces simply conditions.

6. *Diet* produces it only by leaving indigestible matter, and also by inducing colitis, which produces innumerable fecal concretions.

7. Typhoid fever and dysentery are only conditions on which appendicitis may supervene.

8. *Age* is a great factor; most appendicitis occurs between the years of ten and thirty. Few cases occur after forty years of age.

9. Appendicitis may arise from *trauma*.

10. Relapsing appendicitis is likely due to a wide appendicular mouth into which foreign bodies have entered so frequently that they have produced an irritable condition of the appendicular mucous membrane.

The *anatomico-pathological* condition is the battle-ground on which all surgical procedures must rest. In the first place the appendix has not a constant position, and chiefly varies in four directions: (*a*) I have found the appendix hanging over the brim or lying in the pelvis in about twenty per cent. of cases during the examination of nearly one hundred bodies. (*b*) In quite a number the appendix reached nearly or quite to the liver. In one case the appendix lay immediately under the gall-bladder. It was higher than the thin edge of the liver. (*c*) I have seen several cases in which the appendix lay along the external edge of the colon, pointing caudal. (*d*) In many other cases the appendix points toward the spleen and reaches well toward the median line. Of course in each one of these four different posi-

tions an appendicular perforation or abscess would have different anatomical surroundings. The chances of the environments being able to circumscribe the invasion from the appendix is very doubtful in the case of the appendix lying under the liver or where it reaches to the middle line among moving small intestines.

The *position* of the appendix as regards the cecum is variable. The appendix is always found at the termination of the *taenia coli*, that is, at the upper ends of the aggregated longitudinal bands of the large intestines. In man there are three of those bands which, being carefully followed to the lower end of the caput coli, will come to the origin of the base of the vermiform appendix.

There will be found in general four kinds of ceca, in regard to the point out of which goes the base of the appendix: (*a*) The *symmetrical cecum*. In this the anterior colonic band lies in the center of a cecum with an equal bulging to the right or left; the base of the appendix springs from the middle of cecum. (*b*) In another case the cecum gradually tapers, like that of a dog, into the appendix. This is the *fetal cecum*. (*c*) Another type is the *non-symmetrical cecum*, that is, where the bulging of the cecum is more on the right side of the colonic band than it is on the left. (*d*) A fourth type is the *atrophic* cecum, that is, where the colonic band ends at the junction of the cecum and ileum. Then the appendix springs exactly from the point of junction of the ileum and cecum. The left half of the cecum has atrophied, or, rather, has been arrested in growth. I found all those types of ceca in the autopsies of less than one hundred bodies. The cause of the variation in the shape of the ceca and consequent origin of the appendix lies in the ileo-colic artery. This artery varies much in its supply to different parts of the cecum, so that the parts of the cecum which happen to have the greatest blood supply will grow the fastest. Sometimes the left side is the more supplied and at other times the right side. All these conditions are followed by a pathology peculiar to itself.

I wish to make two statements which my work on autopsies has clearly demonstrated:

1. An appendicular perforation can occur *intra-peritoneal*.
2. An appendicular perforation can occur *extra-peritoneal*. The

fluid of the perforated appendix could easily pass backward into the post-cecal cellular tissue.

The appendix originally *always* has a mesentery. But as the cecum grows very rapidly and the appendix atrophies rapidly the cecum steals away the appendicular mesentery, so that *finally*, in adults, the appendix may have no mesentery. Again, a rupture or perforation from mere pressure always occurs in the direction of least resistance, and in the appendix that is just where it is uncovered by mesentery. No doubt this fact accounts for so many post-cecal abscesses. Hence, the variation in form, size, position, and mesenteric covering of the appendix has certain effects in the development of the pathological conditions.

In this short article I will give only three types of appendicitis, which for practical purposes will suffice in the clinical field.

1. The *catarrhal or parietal* form. In this form the mucous membrane is inflamed, which generally involves the muscular appendicular wall more or less. These parietal appendicular inflammations which have occurred in my own operations seem to be a kind of hypertrophic adenoma of the mucous membrane. The glandular part is enlarged and the appendicular secretion is deranged. The appendix is somewhat patulous and the irritation may be due to the repeated entrance and expulsion of foreign bodies. It may be observed under a microscope that the appendix resembles the tonsils in glandular structure. Now the tonsils and appendix are both liable to temporary inflammations at the same ages of life. But few would think of removing the tonsils for a slight and transient inflammation. The appendix is no more in need of removal than the tonsils for simple inflammation which quickly passes away. In the form of catarrhal or parietal appendicitis there are seldom any adhesions. A few straggling adhesions may occasionally be found. It seems to me that this *parietal* appendicitis includes *one third* to *one half* of all cases. I expect flat contradiction from the so-called "aggressive operator," because he will hold up in both hands appendices which contain pus. He will say he operates every time he gets a chance and finds pus. That does not prove that the patient will not recover without the operation, for pus in the appendix is easily evacuated into the cecum by appendicular contractions. The charge I have

to present against the "aggressive operator" is, that he is guilty of unlimited generalization. He seems to think that because he operated on Smith for appendicitis and found pus, that all other cases have pus, and that no patient will get better with pus in the appendix without the active scalpel. The surgeon of unlimited generalization seems to forget that the medical man sees many cases of appendicitis get well with just as violent symptoms as Smith had. The fact is that nearly ninety per cent. of appendicitis gets well without surgery. This gives a ten per cent. death-rate without operative interference. Fenger says five per cent. of appendicitis is fatal. I can not find that surgery in general has a death-rate of less than ten per cent., and generally it is more like fifteen per cent. of mortality. Few cases of catarrhal or parietal appendicitis require an operation at all. I confess that any one suffering from parietal appendicitis would be probably more comfortable without the appendix. But surgery can never be popular that is employed for light and transient causes, and a low mortality justifies in itself no operation.

Many of my colleagues operate for this form of appendicitis and find on slitting open the appendix some muco-purulent fluid, and consider that sufficient proof to demand an operation. I have found muco-purulent fluid and even fecal concretion in cadavers dead from diverse diseases, so that I do not think such condition justifies an operation.

2. The second form of appendicitis I will designate is where the appendix is surrounded with *fibrinous exudate*, and which may be accompanied by *pus* or not. These are grave and violent cases when pus is formed. The *infection* has passed through the appendicular wall, but no visible perforation exists. But the cases of fibrinous exudate are the ones which leave behind peritoneal adhesions. There is no doubt in my mind that these *fibrinous exudates with pus* occur around the appendix and recover, just as they do in the pelvis, with no operation. It is not necessary to have a visible perforation to have pus. However, this class of cases containing fibrinous exudate and pus very frequently terminates in a circumscribed abscess which must be evacuated in some direction before recovery can occur.

Dr. Daniel H. Williams, of Chicago, showed me a typical case where the appendix had perforated and formed an abscess, and

the abscess had then perforated the cecum. In a similar manner the abscess may perforate any portion of gut in contact with it, for example, cecum, rectum, or sigmoid flexure. The abscess may perforate the vagina or pass up along the vertebral column through the diaphragm. *Some* cases with fibrinous exudates around the appendix should be operated on. But about all cases with the fibrinous exudate accompanied by sero-pus should submit to an operation. It may be quite suggestive to state that fifteen to twenty per cent. of autopsies (in men twenty per cent.), dying of diverse diseases, shows remnants of inflammatory bands surrounding the appendix. Twenty per cent. of cases recovered, and as proof the autopsy demonstrates the appendicular adhesions. The difficulty lies in the diagnosis.

3. The third form of appendicitis which is offered for study is that known as *perforative*. Though autopsies show many cases which have had perforative appendicitis during life and finally died of diverse other diseases, yet all perforative appendicitis should have an operation for safety and utility. If the perforation was merely traumatic it would occur in the direction of least resistance. But the perforation of the appendix is, in the majority of cases, due to devitalizing the elements of the appendicular wall by microbic invasion. It is mostly a necrotic perforation; some denominate it gangrenous. Perforation of the appendix follows a series of pathological conditions, as, for example, (*a*) compression from the foreign body in the base of appendix; (*b*) distension from hyperglandular secretion; (*c*) edema from obstructed circulation, especially in obstructing venous flow and lymphatic; (*d*) microbic invasion, and finally, (*e*) local or general necrosis (gangrene). In perforative appendicitis the process may be so rapid as to gangrene the whole appendix; then no exudate can occur from the appendicular wall, as its peritoneal covering is ruined. Such cases are almost surely fatal without an early operation, as general peritonitis will supervene.

Relapsing appendicitis is chiefly catarrhal or parietal. It is likely due to a patulous appendicular mouth, in which the repeated entrance of foreign bodies has created an irritable appendicular mucous membrane. The wide mouth has created conditions easily excited into inflammation. It is not a condition dangerous to life, but such patients are more comfortable and perhaps

more useful by undergoing the risks of an operation. But seldom is the operation required to save life.

The diagnosis of appendicitis is generally not a difficult matter. The difficult point about it is what to do after the diagnosis is made in order to be just to the patient. The essential factors to build a diagnosis on, are *pain* and *tenderness* in the region of the right iliac fossa, and *vomiting, tympanitis,* and *temperature.*

These five cardinal symptoms, of course having a definite relation and connection, are almost a *sign* of appendicitis in men and boys. Appendicitis is much more difficult to diagnose in women on account of the proximity of the fimbriated end of the fallopian tubes. A sixth cardinal symptom is a tumor felt in the right iliac fossa; but one can not find this symptom in more than one third of the cases. The constipation looked on by so many as a cause in the trouble is a mere incident—it is merely a reflex paralysis. The lodging of masses of feces in the cecum is subsequent to the appendicitis.

When the appendicitis starts the irritation is transmitted up the superior mesenteric plexus to the abdominal brain, where it is reorganized and emitted to all the digestive tract. The irritation passes to the stomach over the gastric plexus, to the small gut and upper half of the colon over the superior mesenteric plexus, and to the lower half of the colon over the inferior mesenteric plexus. The first effect which this irritation produces on meeting the digestive tract is on Auerbach's plexus, which lies between the muscular layers of the gut wall. The effect on this plexus is to paralyze it, and the gut lumen is then ready for distension. The second effect of the irritation is that it strikes Meissner's plexus, which controls digestive secretion. Now, irritation on Meissner's plexus will produce, (*a*) excessive secretion (diarrhea), (*b*) deficient secretion (constipation), or (*c*) disproportionate secretion (fermentation).

As the irritation is irregular it is apt to produce disproportionate secretion, which ends in fermentation or the formation of gases. This, in my opinion, is the explanation of *tympanitis* in appendicitis. It is a reflex paralysis, just as the constipation is.

The pain, specifically, in the beginning is caused by the appendix attempting to expel the foreign body. It is appendicular

colic. The pain of pressure may induce the patient to bend the thigh on the abdomen or walk lame. The *temperature* is not very pathognomonic of appendicitis. It aids, but can not be relied on. It often wavers around 100° and 101°.

The *pain* generally depends on the amount of peritoneal surface damaged by the invasion of the infective matter. However, when the abdomen is full of pus, occasionally there is no pain because the centers and system are overwhelmed with infection. The pain should have some constancy in its fixation in the region of the right iliac fossa. But it must not be forgotten that the pain is often a referred one, and generally it is referred to the umbilicus, that is, around the abdominal brain. The first pain is nearly always sudden in its onset. The pain may run down the thigh on account of involvement or pressure of the lumbar plexus of nerves. The *vomiting* is sudden and reflex. The *tenderness* is simply a symptom of newly diseased tissue. In my experience appendicitis has occurred chiefly in young females.

Appendicitis may be mistaken for (*a*) *hepatic colic.* But in hepatic colic the pain radiates more toward the shoulders and back. The pain flashes up the phrenic nerve, the pneumogastric nerves, and over the hepatic plexus to the abdominal brain, thence up the lateral chain of sympathetic nerves. The writer has often shown that the part of the hepatic plexus supplying the gall duct is very large and numerous. Hence the nerve connection with the gall ducts is profound and large and has three routes to reach the shoulder. The vomiting in hepatic colic is more violent, severe, and persistent than in appendicitis. (*b*) Appendicitis is often mistaken for *nephritic colic,* from which it is not always easy to distinguish. But no doubt many post-cecal abscesses are opened for nephritic when they are really appendicular. (*c*) I have seen several cases of *acute indigestion* that could easily be confounded with appendicitis. (*d*) The various bowel obstructions could be confounded with it, for example, invagination, volvulus, strangulation by inflammatory peritoneal bands or through apertures, etc. (*e*) I have seen it confounded with pelvic disease in women.

The treatment of appendicitis is at present the unsettled question. It is likely to be indefinite for some time. Shall it be *surgical or medical?*

In regard to the surgeon who frequently operates and advocates operation in nearly every case, I would say that he is guilty of unlimited generalization which will not stand analysis. Again, I think the surgeon is deceived in this way, for example, he is generally called to grave cases where the medical man is alarmed. Now, such cases are likely to be among the worst and need an operation. The surgeon is apt to think all cases like the one he is called to see. But the practitioner sees many cases which recover without operation, and he does not call the surgeon at all. Another deception arises with the surgeon, in that operated cases are published and *noticed* while innumerable cases seen by the medical man are never published.

The other day Dr. J. H. Hollister remarked to me that he had seen very many cases in his long practice, and nearly all recovered without an operation, and that he advised many not to submit to an operation. Dr. Hollister's practice has extended over so many years of active hospital work that it would be refreshing for the aggressive appendicular surgeon to talk an hour with him.

In favor of the medical recovery of appendicitis, I would note that Talamon, of Paris, says ninety per cent. of appendicitis gets well with a certainty without an operation. Guttman, of Berlin, treated one hundred cases in the Moabit Hospital with four deaths. Treves, of London, says eighty per cent. of patients suffering from appendicitis gets well spontaneously. My personal experience, observation of others' cases, and perusal of medical literature, convince me that eighty-five per cent. of all cases of appendicitis recovers without the knife. Listen to the story of autopsies:

Maurin did one hundred and twelve autopsies, and found sixteen per cent. of peri-appendicular adhesions, remnants of a previous appendicitis, and states distinctly that nothing in the antecedents of the patients gave any hint that the lesion found at the autopsy existed.

Hektoen, of Chicago, did two hundred and eighty autopsies, and found appendicular adhesions in fifteen per cent. of cases.

Ferguson did two hundred autopsies, and found seven per cent. of peri-appendicular adhesions. Three of Ferguson's cases had recovered from a *perforative appendicitis.*

Taft found thirty-six per cent. of peri-appendicular adhesions in five hundred autopsies.

Nearly one hundred of my own autopsies gave about ten per cent. of appendicular adhesions.

Here are over one thousand autopsies on patients dying of diverse diseases. They demonstrate that twenty per cent. of adults suffers from appendicitis and recovers without operation. In regard to the time of operation one can not make hard and fast rules.

The subject of appendicitis should be carefully weighed in life insurance. Insurance companies will reject subjects of appendicitis or put them in separate classes.

To sum up, each case must be judged by itself whether it be medical or surgical, and only by the harmonious and judicious action of practitioner and surgeon can justice be given to the patient. An experienced surgeon, acting in conjunction with an experienced practitioner, generally comes to right conclusions as to proper action. In this article I will not enumerate or detail my own cases, but prefer to formulate some general conclusion.

Conclusions. 1. The diagnosis of appendicitis rests on pain and tenderness in the right iliac fossa, vomiting, temperature, and tympanitis. A tumor may be found in about one third of the cases.

2. The *pain* is due to appendicular peristalsis. It may arise from perforation. It is appendicular colic, or may be due to inflammatory invasion. The constipation is not mechanical but *reflex*. The tympanitis is due to reflex paralysis of the bowel. The vomiting is reflex. The lameness is due to pressure on the lumbar plexus. The sudden cessation of pain is often due to the expulsion of the body into the cecum. Adhesions may induce pain.

3. The infective invasion of appendicitis may induce edema, hemorrhage, or phlebitis in the right iliac fossa. I know of an embolus going to the liver after operation and infecting it, killing the patient.

4. The appendix resembles the tonsils and is subject to similar temporary inflammations at the same ages in both sexes. It is lymphatic in structure. Its glandular (lymphoid) element is large.

5. About one half of appendicitis is catarrhal or parietal and should not have surgical interference. Relapsing appendicitis is not a dangerous malady. All suppurative and perforative cases of appendicitis should be operated on as soon as diagnosed.

6. My experience with appendicitis in children is that it is very progressive and very fatal, and should be operated on as soon as reasonably diagnosed. It invades rapidly in children on account of its large lymphatic constituents.

7. Males have appendicitis four times as often as females.

8. The age of appendicitis is the same in both sexes—from ten to thirty years mainly.

9. The chief cause of appendicitis lies in the small size of the appendicular mouth. The mouth is guarded by a valve of mucous membrane (Gerlach's). With a small mouth objects insinuate themselves through, but irritation of the foreign body on the mucous membrane of the appendix induces it to swell and close the mouth so that the foreign body is unable to get out. It seems to the author that Gerlach's valve is larger in men than women.

10. The vermiform appendix is the most variable organ in the body, viz., in length, situation, and peritoneal environments. Hence its pathological conditions vary in position and environments.

11. Many hundreds of autopsies show that from fifteen to twenty per cent. has had appendicitis and died of other diseases. The peri-appendicular adhesions remain.

12. Anatomical description of the appendico-cecal region has varied from the beginning until now. The main statement which can be made at present is that the cecum is entirely covered by peritoneum while the appendix always originally had a mesentery. The peritoneal attachments vary because the rapidly growing cecum steals away the peritoneal covering from the atrophying appendix.

13. A perforation of the appendix will nearly always open into the peritoneal cavity, but it may open into the post-cecal areolar tissue. In this case it will open between the layers of the meso-appendix and pass over the upper border of the cecal peritoneal covering.

14. Microbes play the chief rôle in appendicitis. They multiply rapidly when the appendicular mouth is closed and the

appendicular secretion is deranged, producing perforation and disturbed circulation.

15. The result of closure of the appendicular mouth is irritation. The glandular secretion becomes excessive and disproportionate from the irritation of the foreign body and microbes. Deranged and fermenting secretion, confined, aids downward progress. The circulation is deranged, the veins and lymphatics become overfilled, edema results, local or general necrosis (or gangrene) follows, and a perforation of the appendix supervenes, which induces local or general peritonitis. If limited by exudates the peritonitis will be local. But peritonitis and exudates can and are produced by microbes or their products (ptomaines) penetrating the appendicular wall, leaving no visible perforation.

16. The pain is felt in the right iliac fossa in about half of the cases, and the other half feel the pain in the abdominal cavity—not localized. In general most abdominal pain is felt around the umbilicus, that is, over the abdominal brain. There is frequently a referred pain in appendicitis. McBurney's point is useless and untrustworthy.

17. In my experience in young women frequent micturition often accompanies appendicitis. The abscess is more liable to move into the pelvis than in man. It may be due to the appendix hanging over the brim of the more spacious female pelvis more frequently than in males.

18. Bowel obstruction and constipation in appendicitis is reflex, not mechanical.

19. Vomiting is due to reflex irritation carried up the superior mesenteric plexus to the abdominal brain, where it is reorganized and emitted to the stomach. Every viscus suffers from the reflex irritation, especially those supplied by a large plexus of nerves containing many nerve strands, as, for example, (*a*) the stomach, (*b*) the small intestine, (*c*) the heart, (*d*) the kidney, (*e*) the spleen, (*f*) genito-urinary organs, (*g*) lungs.

20. The tenderness in the right iliac fossa is not uniform in location, but exists wherever the pathological appendix happens to lie.

21. The rise of temperature is due to oxidation of toxic substances in the blood—infection. A subnormal temperature may be due to overwhelming the system with the toxic substance. It

seems that violent irritation of a sympathetic plexus of nerve can raise or lower temperature.

22. Perforation of the appendix infects the pelvic organs of woman, and the tubal and ovarian infections infect the appendix.

23. Probably ninety-five per cent. of the diseases about the cecal region arises in the appendix.

24. In regard to operation in appendicitis it may be asserted that a low mortality in itself does not justify any surgical procedure.

25. Cases of acute appendicular perforation with diffuse peritonitis should be operated on, though nearly every case is fatal. Out of over two hundred autopsies on dogs killed or dying, after I had performed abdominal experimental procedures, I found no dog survive general peritonitis. I know of two surgeons of this city who have operated on seventeen cases of diffuse peritonitis following appendicitis, and every case died.

26. Localized abscess in the cecal region should be incised, and if it be not too dangerous for the patient, the appendix should be ablated.

27. Subjects of severe recurrent appendicitis should be operated on for comfort and utility of the patient.

28. The cardinal principle in the operation is to manipulate the viscera as little as possible. If one evacuates an abscess in the cecal region it seems unwise to waste time or manipulate very much in order to get the appendix: simply irrigate and drain with gauze. It is not perfect surgery but it is *safe* surgery, which is really the most perfect to the patient.

29. The various forms of appendicitis give varied results in operation. The diffuse peritonitic form gives almost one hundred per cent. mortality; the recurrent form has some eight per cent. fatality; the general mortality for appendicular operations will be not far from fifteen per cent., except in the cases of individual surgeons who operate on almost every occasion. It would appear that the surgical mortality is over fifteen per cent., while from the best sources that about eighty-five to ninety per cent. recovers without operation. At this rate nature has less mortality than the art of surgery.

30. Treves says that eighty per cent. of cases of appendicitis gets well spontaneously. Talamon says ninety per cent. gets well

with a certainty with no operation. Guttman treated medically one hundred cases, and four died.

31. The foreign body in the appendix is generally dried feces mixed with calcium salts, and not some solid body, so that, as far as our present knowledge goes, physicians can not claim that swallowing cherry stones, grape seeds, or fruit pips, etc., tends to induce appendicitis. No doubt some form of indigestion or colitis precedes many cases.

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32. Observation and practice seem to teach less surgery on the appendix than formerly. Judgment is becoming more accurate as to what cases demand operation. Autopsies and pathology would seem to limit operative work more and more. *Post-mortems* are telling their more exact story of frequent appendicular lesions from which the patient recovered. The following of conservative but representative men like Treves, Guttman, Talamon, Fenger, and many others is increasing. Yet reasonable surgery will always hold an important place in appendicular diseases, for the appendix is a useless organ.

CHICAGO.

THE INCH-AND-A-HALF INCISION AND WEEK-AND-A-HALF CONFINEMENT IN APPENDICITIS.

BY ROBERT T. MORRIS, A.M., M.D.

[Written for MATHEWS' MEDICAL QUARTERLY.]

More than a million dollars have been paid to expert consultants who made the diagnosis of typhoid fever, idiopathic peritonitis, typhlitis, or internal strangulation of bowel in cases in which the disease was really appendicitis. Consequently, that money was expended to no purpose by the patients.

More than a million patients have died of appendicitis because the consultants made other diagnosis at a time when prompt operation would have saved life. Consequently, these deaths were unnecessary.

We can not realize how common appendicitis is until we have rubbed our eyes and looked about a bit. Within the past five years I have removed fourteen infected appendices for the patients

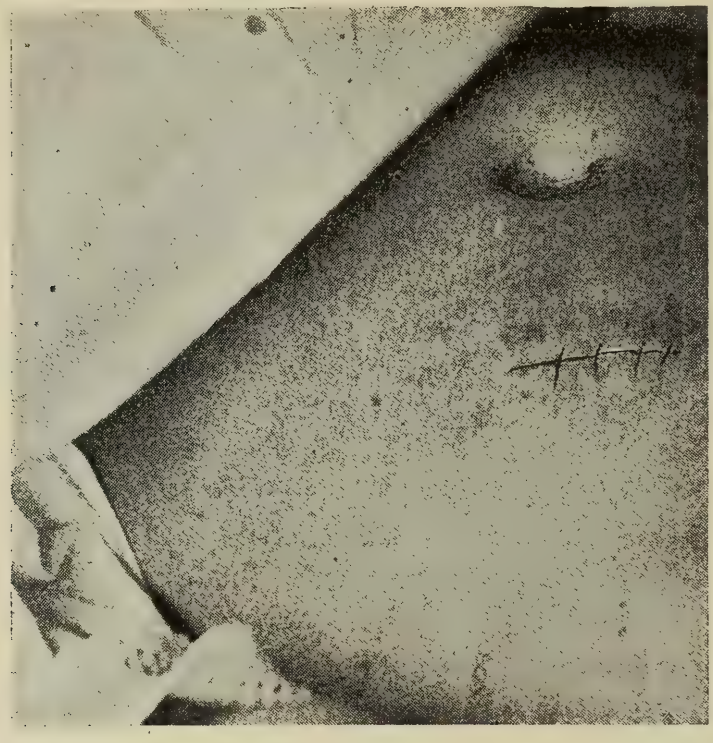
of one venerable physician, who in more than thirty years of practice had not previously made the diagnosis of appendicitis, and I believe him to be a representative practitioner who has had no more than an average proportion of the cases under his care.

The correct diagnosis and safe operation in appendicitis come *au fin de siècle.*

One of the most vivid pictures in my memory is that of a celebrated German anatomist with scalpel in hand making a *post-mortem* examination and noting points which were jotted down in the record book by his assistant. The cecum of the cadaver was covered with thick, gray lymph. The appendix was not examined because it happened to be buried in pus and adhesions, and because it was only a little thing, anyway. "Perityphlitis!" said the professor. "Perityphlitis," mumbled the assistant as he put the note where it would go on record.

It was only a decade ago that we began to examine infected cecums closely enough to collect accurate *data;* and then followed the era in which rules for finding inguinal pus were elaborated, in the intention of operating for the evacuation of pus when it was discovered. How well we remember the day when authorities were ranged along the line of argument as to whether abscesses in appendicitis were extra-peritoneal or intra-peritoneal. Later information was to the effect that the patient's chances for recovery were better when the appendix was removed before pus got on any side of the peritoneum. Then we tried different waiting periods before operating, and these periods became shorter and shorter because we were often made sorry, for when we waited to see how a case would turn out we often found out. We found out that the patient was going to die because we had waited too long; or that he was going to recover. But we never, never, never knew when the patient had recovered, and that was a sticker for honest counsellors. By rational deduction we are to-day aware that the appendix should be removed as soon as a diagnosis of appendicitis can be made. No important question of late years has received more summary treatment than the one as to the proper time for operation in appendicitis; and as the question is wedge-shaped, with deaths grouped at the late end, we have slid quickly down to the point which on my indicator rests at the words "no delay." In the evolution of the prompt oper-

ation for removal of an infected appendix I have reached a position from which it seems best to ask surgeons to accept as standard, an abdominal incision one inch and a half in length, which confines the patient to his room for a week and a half. It is not



Incision one inch and a half in length ten days after the removal of the appendix. This shows the wound healed by primary union, cat-gut suture absorbed, but slight stitch-marks remaining on either side of the wound line.

necessary to repeat here in detail my theory of appendicitis, which, briefly stated, describes the disease as an infectious exudative inflammation of the appendix vermiformis ceci, caused by bacterial invasion of a structure which is not well equipped for self-defense. The reason why bacteria gain entrance into the tissues of the appendix is because the guarding mucosa of that structure is easily bruised between a full cecum and a hard pelvic wall, or it is eroded by concrements. The reason why the appendix is not well equipped for defense is because the inner tube of mucosa and adenoid tissue is so closely confined within the outer tube of muscle and peritoneum that it can not swell much without cutting off its own vascular supply and causing a resulting train of effects.

Appendicitis once established may continue to smoulder for years without causing any important symptoms, or it may blaze up and destroy the patient in a jiffy. Usually the disease smoulders for years and blazes up from time to time. Medical treatment smothers the blaze frequently, but the smouldering continues while the patient believes himself to be well. Sometimes the patient is not deceived, but his physician is; and when these patients come to us for operation, without the knowledge of the family physician, it is often difficult for us to persuade them that it is best to have his counsel and assistance in the case.

The inch and a half incision is made through the right linea semilunaris and all structures of the abdominal wall. The colon is readily distinguished by its longitudinal muscular bands. The direction of the colon is determined by exciting reversed peristalsis with a crystal of sodic chloride. The appendix is always found exactly where the long muscular bands of the cecum terminate. Adhesions are separated with a finger introduced into the abdominal cavity. If pus is present, or if adhesions are widely attached, or if the appendix is attached to the gall-bladder, or left ovary, the inch and a half incision must be discarded for a longer one; but the longer incision is the exception in the class of cases that I am getting nowadays. The mesentery of the appendix is ligated with fine cat-gut. The base of the appendix is ligated very close to the cecum with a fine strand of eye silk to prevent intestinal contents from seeping into the wound. The ligated stump is buried with three Lembert sutures, for, if it were not so buried, perforation occurring under the ligature might cause trouble. The abdominal wound is closed with separate tiers of fine cat-gut sutures for the separate structures of the abdominal wall. If we used a single tier of sutures for aponeuroses which pull in different lines of traction, the patient would not be out of bed at the end of his week and a half.

Allow me to make one final request. Kindly fail to find seeds in the appendix. It requires a strong, sturdy, moral nature to bear up against the wishes of the patient who expects to be pleasantly surprised by the report that a seed was found in his appendix. Please send the seed-like concrements to the chemist before making a report.

New York.

PATHOLOGICAL CONDITIONS OF THE LARYNX, OCCURRING AS SYMPTOMS OF GASTRO-INTESTINAL DISORDERS.

BY FRANK WOODBURY, A. M., M. D.,

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[Written for MATHEWS' MEDICAL QUARTERLY.]

Previous to the introduction of the laryngoscope and other means of accurate observation into clinical medicine, cases of alleged "stomach cough" were frequently encountered; but at the present day, with our improved methods of examination and studied precision in diagnosis, they have become comparatively rare. Indeed, at the present time some of our best treatises on throat and nose affections fail to include disorders of the intestinal tract among the possible causes of laryngeal disease, and "stomach cough" is not mentioned. At the same time, all authors unite in recommending appropriate hygienic and constitutional measures both in the prophylaxis and therapeutics of laryngitis, in either its acute or chronic form, and give more or less specific directions concerning the food of the patient and the correction of all disorders of the digestive organs.

Writers upon the diseases of children generally acknowledge that cough is an occasional result of the presence and pernicious activity of intestinal worms, or of indigestible food, in the alimentary canal. Laryngismus stridulus, or spasmodic closure of the glottis, otherwise termed "inward convulsions," in children, is now believed to be caused by intestinal irritation, and by good authorities the opinion originally expressed by Dr. James Read has been generally adopted, that indigestible or otherwise, improper aliment is an active agent in the causation of this alarming affection in a large proportion of the patients. In severe cases, the best authorities state that evacuation of the bowels by a stimulant enema is an expedient which should not be neglected. Marshall Hall insisted upon the neurotic character or reflex nature of spasm of the glottis, and declared that the cause of it was almost always to be found either in "a morbid state of the teeth, in disorder of the stomach, or of the bowels." (Fagge.)

The clinical observation, that in many asthmatic patients the

attacks are directly attendant on errors in diet, leads us to carefully regulate the times and seasons of food-taking in accordance with the idiosyncrasies of this class of sufferers. In some, indeed, it is only by resorting to the use of artificial digestants, or the peptonization of food, that we can overcome the peculiar susceptibility of the alimentary tract.

This was first practiced by the late Dr. Randolph, of Philadelphia, who by this means succeeded in enabling a patient subject to this affliction to live in a condition of relative comfort and comparative immunity from his distressing attacks of dyspnea.*

A somewhat analogous illustration is seen in acute laryngitis or ordinary croup in children, where an emetic affords such prompt relief as to warrant the opinion that the spasmodic attack was determined by irritating food or an overloaded stomach. Croupy children indeed are enabled to escape many such attacks by limiting the evening meal to very light articles of food. Just in this connection it is of interest to place in apposition the fact that urticaria is very frequently excited by special articles of food which cause irritation of the stomach with the fact that nervous asthma has been regarded by some authorities as an "internal urticaria." The idea of Theodor Weber, that the phenomena of asthma are produced by swelling of the mucous membrane, the result of sudden dilatation of the blood-vessels through the agency of the vaso-motor nerves, it might be here said parenthetically, was confirmed by Stoerck after direct observation of the trachea during an attack. Hyde Salter observed a case of asthma which was due to constipation, and was promptly relieved by evacuating the lower bowel.

The nerve relations of the stomach and the larynx are sufficiently direct and numerous to explain this reflex connection. The mucous membrane of the larynx as well as its intrinsic muscles are dependent for the power of sensation and of motion, respectively, upon the superior and inferior (or recurrent) laryngeal nerves from the vagi, which elsewhere distribute their terminal filaments to the stomach—the left pneumogastric also extending its filaments to the small intestine, where they freely communicate with the mesenteric nerves through the celiac plexus and the splenic plexus.

* Randolph & Dixon: Notes from the Physiological Laboratory, University of Pennsylvania. Philadelphia. 1885.

The superior laryngeal nerves also receive filaments from the sympathetic nerve through the pharyngeal plexus. So that it is evident that good anatomical and physiological reasons exist why the larynx might be disturbed in its functions when the digestive tract is disordered.

Embryologically even a closer connection can be traced between the air-passages and digestive tract. In the first place both are of hypoblastic origin, the trachea and lungs being produced by outgrowth laterally of pouches extending on each side from the upper end of the primitive intestine. The cartilages of the larynx are considered to be the vestiges of the fourth pharyngeal branchial arch, as the greater cornua and body of the hyoid bone are the sole representatives of the third arch; these are also largely hypoblastic in structure.

Without stopping to discuss the fact of contiguity and the possible extension of morbid conditions from larynx to the pharynx and esophagus, or the reverse, it is incidentally noted that the mucosa being structurally continuous, irritating articles of food in passing along the esophagus may give rise to a sensation of irritation in the larynx. While solid substances may be accidentally inhaled into the larynx or trachea and cause spasmodic cough, it is probably true that when patients complain of "food going the wrong way" during swallowing, it is really only some fluid of acid or other irritating character which has found a sensitive spot in the gullet or has come in contact with the under surface of the epiglottis.

Attention has been called by Franz Heller to the fact that acid fluids may escape from the stomach along the esophagus, and, when the position is favorable, reach the larynx and excite spasmodic cough, especially at night when the patient is recumbent with his head low. Whether this deserve serious consideration or not, it must be admitted that gastric catarrh and laryngitis are frequently associated in the same subject, and that the possibility of permanently curing the latter affection often depends entirely upon our success in removing the former condition.

There is a very important relation of cause and effect between diet and laryngeal disorder that is important to consider. This is universally appreciated by professional singers, who experimentally, and quite empirically, have learned to abstain from cer-

tain articles of diet or from indulging their appetite by eating a quantity of food previous to the time when they wish to get the best results from their vocal efforts; and, on the other hand, they often resort to special kinds of food or drink in order to improve the tone or get into "good voice." For instance, Dr. J. Solis Cohen directs attention to the effect of malt liquors in producing congestion of the larynx, and declares that many a baritone owes his deep, heavy voice to the glasses of beer he has swallowed just before coming on the stage.

In the production of the so-called "catarrhal state," food is generally acknowledged to be a most potent factor. Dr. Mulhall, of St. Louis, has reported cases of obstinate post-nasal catarrh which resisted all treatment for weeks, but which were entirely and promptly cured by a course of dieting and exercise incident upon a period of training for a pugilistic exhibition. The dependence of laryngitis upon post-nasal catarrh, at least in a great many instances, is commonly recognized; in point of fact the two disorders are only arbitrarily separated, and are in reality often simply parts of the same morbid process.

Habitual overfeeding and indolent habits, therefore, may cause not only nasal catarrh (as pointed out by Schneider, the eminent anatomist, in whose honor the Schneiderian membrane was named), but it may indirectly or directly cause primary, or consecutive, catarrhal laryngitis in a way easily understood.

It may be of interest, briefly, to refer to the etiology of some morbid growths in the larynx, the result, as Cohen has clearly shown, of excessive use of the voice during the existence of congestion of the vocal chords. When the mucous membrane of the larynx is swollen the vibration of the vocal chords, especially at the nodal points, causes friction and abrasions upon the opposing free edges of the bands. This is followed by proliferation and exudation and the development of small papillary-like cicatrices or vegetations upon the vocal chords, which may become permanent and increase in size, interfering more or less with the voice, according to their size and location.

Therefore, if it be admitted that conditions of the intestinal tract may excite congestion or predispose to repeated attacks of catarrhal inflammation in the larynx, it is equally evident that they may also be the primary cause of some morbid growths.

The etiology of cancer is still obscure, but from the well-known relation between long-continued irritation of an epithelial surface and the subsequent occurrence of malignant disease, it may be merely suggested in this connection that, where any predisposition to the development of epithelioma is supposed to be present, it would be a wise precaution in the first place to avoid such articles of food, or prevent such disorders of the stomach, as might contribute toward producing or maintaining catarrh of the upper air-passages, and in the second place, to forbid excessive use of the voice when such condition of the larynx is present as has been indicated above.

An application of the foregoing views to therapeutics would, in the chronic cases particularly, lead to less dependence upon local treatment of the larynx and its entire avoidance in proper cases, with increased attention to the diet, and to the discovery of reflex sources of irritation in the digestive tract.

It is generally believed that nasal abnormalities are a frequent cause of laryngeal disease, both neurotic and somatic; and both analogy and clinical observation indicate that we may equally have morbid conditions of the larynx as symptoms of gastro-intestinal disorder.

PHILADELPHIA, PA.

ABDOMINAL SINUSES AND FISTULÆ.

BY JOHN B. HAMILTON, M. D., LL. D.,

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[Written for MATHEWS' MEDICAL QUARTERLY.]

Before the days of aseptic surgery the abdominal sinus or fistula was among the *opprobria*. The poor patient was condemned to live with an additional opening somewhere on his cutaneous surface, and there was little to be promised him in the way of cure. The deep fecal fistulæ were considered quite beyond reach, although the superficial ones were reached and sometimes cured by the method of Dupuytren.

Definition. First of all, let me define the word *sinus* as a fistulous tract extending from some former abscess cavity to the sur-

face of the body. According to the site of the abscess and various circumstances this tract may be long or short, tortuous or direct; but in any event it always has a closed extremity. The word *fistula* is held to mean a fistulous tract having two open extremities, one on the cutaneous surface of the body and the other on some mucous or serous surface. The *sinus* is therefore a tube sealed at its inner extremity, and the *fistula* an open tube. The sinus tube conveys pus, and usually liquefied tubercle, and the fistula tube conveys pus plus the serous, mucous, or excrementitious matters found at its inner extremity. The treatment of the two conditions therefore differs, the one perhaps involving simply drainage, and the other frequently involving a complicated enteroplasty, cystoplasty, or vesicoplasty.

Etiology. If we examine the relative causation of these affections, we shall find that the sinus may be the result of a psoas abscess, perinephritic abscess, splenic abscess, hepatic abscess, a degenerated tumor, or the result of an antecedent operation; in either case there has been imperfect drainage of the original pus collection, and the formation of a pyogenic granulation surface along the sinus tract. The origin of the fistula is different—the ordinary fistula in ano, for example. In this condition there has sometimes been a direct tubercular infection of the rectal wall and a direct extension into the tissues. In these cases the tubercle bacilli are seldom found alone; they are usually accompanied by several varieties of pyogenic microbes. In other cases there has been an invasion of the loose connective tissue adjacent to the rectum by the ordinary pyogenic microbes; an abscess results which points externally and into the rectum at the same time. The ischio-rectal abscess is not very often, according to my observation, the cause of fistula in ano. Much more frequently this condition is the result of tubercular disease of the ischium, opens externally, and remains as a large sinus with ragged and undermined edges. The deeper abdominal fistulæ most frequently result from tubercular abscess of the mesentery, tubercular disease of the intestinal glands, tubercular disease of the liver, or accidental traumatic causes.

Diagnosis. We have in plain sight an opening in the groin, or almost anywhere on the cutaneous surface, discharging pus. If the discharge also contains fecal matter, urine, bile, pancreatic

juice, or intestinal juice, we know that we have to deal with a fistula communicating with a particular viscus of the abdomen. The situation of the opening affords little indication of the site of the internal end of the fistula tube. I have through the courtesy of my colleague, Professor Senn, recently seen a case where the external opening of a fistula in ano was on the posterior surface of the thigh, about the middle third, and there are many instances of similar seemingly erratic places of opening. But the invariable rule followed in the pointing of all abscesses, that an abscess points in the direction of least resistance, is not departed from, even in these extreme cases, and there are various determining factors which the limits of this article do not permit me to enter upon here. In the case of the abdominal sinus so constantly opening just below Poupart's ligament, we see easily enough that the line of least resistance from the psoas or perinephritic abscess lies along the psoas muscle, but the stream of pus following the iliac vessels sometimes passes through the crural arch and appears at the saphenous opening, or it may continue underneath the fascia lata and appear where that fascia becomes thinner and diaphanous at the apex of Scarpa's triangle. These well-known clinical features are recited because they are sometimes forgotten and lead to confusion in diagnosis. A tubercular abscess pointing at the saphenous opening is not infrequently mistaken for femoral hernia. Moreover, we must always remember the route traveled by the antecedent abscess if we expect to have success in the operative treatment of the sinus or fistula.

Treatment. The general principles only can be mentioned. No treatment is likely to be successful which does not take into account the original cause and clearly differentiates between the sinus and the fistula. When the probe passes from an external opening to a bone, we must surely lay open the whole tract and carefully explore the bone surface, for here as elsewhere we may find that the center of tuberculous infection or osteo-myelitis is at a point quite distant from the point of contact with the probe. In the case of the deep abdominal sinus I employ in its exploration the black rubber, flexible, olive-pointed bougie. The tract should be followed with great gentleness until the farther extremity shall have been reached. In this exploration we must

find out whether the tract is extra-peritoneal or intra-peritoneal. In the majority of cases the tract will be found to be extra-peritoneal; and when not extra-peritoneal anatomically it will be found to be so pathologically by reason of the consolidation of the inflammatory limiting fibrin along the tract. When the upper end of the tract has been reached with the probe, we then make external incision along the anterior border of the erector spinæ muscle, carefully deepen the incision, and make search for the end of the probe. The incision must be extended until it is found. When finally found it should be grasped with the fingers or forceps and brought out through the wound. We then tie around the olive tip a stout cord or silk ligature of large size, insert the end into a rubber drainage-tube previously perforated and carefully prepared, tie it securely so that it may be withdrawn with the long tube, which must now with the bougie probe be drawn out at the original opening. The wound may now be flushed with sterilized water and closed upon the tube with silkworm-gut stitches, and an antiseptic chemical solution thrown through the tube. The tube should afterward be flushed with an antiseptic solution once a day or twice a day until the discharge ceases, and the fluid finally passes through the tube without discoloration. In case of hemorrhage a strip of gauze may be used for a few days, and then used to draw the rubber tube through the tract. As large a tube as the caliber of the tract will admit should be used, as the small tubes not only do not insure proper drainage, but themselves aid in keeping up the infection.

The treatment of the abdominal fistula consists in laying open the tract quite down to the viscus entered by it. The opening in the intestine, bladder, or gall cyst is then to have its edges pared, and the serous coats about the opening secured to each other by the fine silk suture of Lembert. The walls of the fistulous tract must now have their pyogenic character destroyed by the thermo-cautery or the electric cautery. This actual cautery need not be very deep, but it must destroy the pyogenic surface. Then close the wound without drainage. When in cases of fecal fistula the intestinal orifices are near the surface, the tract will have long ago been cut off from the peritoneal cavity. The incision must take this into account, and where it can be prevented the

cavity should not be opened. This necessitates a small incision in such cases. When the fistula arises from an intestinal opening near the cecum, the abdominal incision should be made as in operation for appendicitis. Rigid asepsis should be the rule in all these operations.

CHICAGO, ILL.

THE RADICAL TREATMENT OF STRICTURE OF THE RECTUM VIEWED FROM THE STANDPOINT OF ITS ETIOLOGY.

BY JOHN P. BRYSON, M. D.

[Written for MATHEWS' MEDICAL QUARTERLY.]

Stricture of any hollow organ is classed as an obstructive disease, is described as an obstruction to the flow of physiological currents, is defined as an obstacle to the passage of an instrument, is diagnosticated as a mechanical narrowing, and until very recently at least, and even now by the great majority of surgeons, is treated as a purely mechanical affair and after a purely mechanical fashion. One recent writer has even gone so far as to propose a purely mechanical etiology for the disease, viz., friction. One would think that the study of the subject of stricture involved only physical problems, dealt with questions of non-living matter, and that biological laws were of no, or at most of very little, importance. And yet the obstructive, that is to say, the mechanical element in the pathological entity we know as stricture, is as purely a symptom as dropsy is a symptom of certain cardiac, renal, or hepatic diseases.

It is to be said in favor of the "physical" school that they were logical in their ways, even to the extremity of treatment. The mechanical classification, definition, and conception was, logically enough, followed by mechanical therapeutics. They found what was thought to be a mechanical obstacle, and they attacked it mechanically. Much perseverance has been shown in this method. Almost invariably the obstacle returned shortly to plague them, but it was again and again attacked and in the same way.

Yet, both teleologically and etiologically, the subject of stricture is well enough developed on the pathological side to justify

many positive and most valuable conclusions respecting definition, classification, and method of radical treatment. Viewed from this standpoint, the structure tissue is built up, not with the purpose of obstructing a duct, but in order to resist the return of the contents of that duct into the body from which it has perhaps but recently been excreted, or the entrance by some other channel than the proper and physiological one. Thus, in the case of the urethra—where the process has been most carefully studied—absence of, or a certain amount of damage to, a zone of mucous membrane is followed by the growth of stricture tissue around that part of the duct. It is to be noted that this stricture-building does not begin until the overlying mucous membrane ceases to serve as an efficient physiological barrier to urine leakage; but that it not only ceases to develop, but disappears by absorption so soon as the physiological (urine-tight) lining of the duct is restored. Observation of these facts led Reginald Harrison to formulate the law that urethral stricture-building was the result of urine leakage. That the purpose of the stricture growth is not primarily to close or obstruct the duct, is to be seen in the fact that the same growth takes place in other parts of the body, if urine is kept for a long time in contact with them when denuded of their physiological protection, for instance, the walls of fistulæ. These fistulous walls are histologically identical with the stricture bands, and undergo involution so soon as the urine passes by the natural channels and no longer remains in contact with them. It thus becomes possible to formulate the proposition that urethral stricture has its beginning in the urethral mucosa, and to say that without damage or destruction of the mucous membrane there would be no stricture-building.

If such a urethral stricture be cut (externally or internally), violently stretched and torn (divulsed), or caused to inflame and disappear by absorption (gradual dilatation), it will quickly return unless prevented by the persistent introduction of dilating instruments. Thus mechanical treatment deals only with the mechanical symptom, and is palliative, not radical. In other words, we do not cure a disease by abolishing one of its symptoms.

If, however, we exsect the strictured area and accurately suture the healthy mucous membrane behind to the healthy mucous

membrane in front, getting union *per primam;* or, if we do a urethrectomy for the strictured portion and transplant some healthy mucous membrane, the lumen of the duct remains uncontracting without the necessity of re-introducing dilating instruments. In the one case we have restored the mucous lining of the duct in its integrity, in the other we have not.

Mutatis mutandis, what has been stated of urethral will apply with equal force to rectal strictures. In a paper read by me at the Newport meeting of the American Association of Genito-Urinary Surgeons (1889),* I offered as a pathological definition of urethral stricture, chronic, contracting peri-urethritis (*Urethritis stringens chronica*). Holding close to this purely pathological definition, it is not difficult to distinguish between stricture and those more mechanical coärctations with which it is so frequently confounded. The one most nearly resembling stricture is that form of congenital stenosis which assumes a form of a diaphragm, and is usually found in the lower third of the rectum. On the mechanical definition there is no adequate justification in the exclusion of this from the classification of stricture. Anatomically it is a linear stricture of the most typical kind; but, measured by the pathological definition, it falls entirely out of the category. Let us apply the measure.

There are certain features that are common to stricture of all hollow organs. We will apply the measure as they are enumerated: (1) In stricture there is always a damaged and inefficient mucous membrane or none at all (cicatricial stricture) lining the affected portion; in congenital stenosis the mucosa is intact. (2) In stricture there is a chronic inflammation which constantly adds new tissue to the stricture mass, persistently pushing the remainder of mucous membrane toward the axis of the duct, and often forcing it up into longitudinal ridges; in congenital stenosis there is no inflammation of any kind, no increasing narrowing, no folding up or pushing inward of the mucosa. (3) In stricture there is a pathological state, slow-moving but persistent throughout stricture-building; in congenital stenosis there is no pathological condition, but only an anatomical and stationary one. (4) Therapeutically the contrast is equally striking, for in stricture linear proctotomy does not cure radically, while in congenital

*Journal of Cutaneous and Genito-Urinary Diseases, June, 1889.

stenosis linear division or even nicking and tearing bring permanent results.

Measured in the same manner and by the same standard, other diseases and conditions, such as periproctitic abscess and fibrous bands, peritonitic thickenings and contractions, pelvic tumors, prostatic overgrowths and prostatic swellings, yea, even the much-vaunted and apparently never-to-be-neglected muscle spasms are excluded and cast into the extra-stricture world, let them pursue ever so loud an "obstructive" policy. Cancer, beginning as it does in the mucosa and possessing obstructive features of the highest respectability, can not enter in under the definition of "chronic contracting periproctitis," but must remain plain cancer of the rectum.

To all of these conditions and diseases, however, belong obstructive symptoms of the most important kind, which demand surgical intervention and tax our surgical therapeutics, but are only symptoms and not essential pathological characters, even though many of them threaten or destroy life only by obstructing the duct.

It is clear, then, that stricture, under the definition given above, can only be radically cured by restoring the mucous membrane to its physiological integrity. It is the object of this paper to point out and to emphasize this point, and not to discuss the surgical means at our disposal for accomplishing this object. I shall reserve this matter for another communication soon to be made, and content myself with mentioning the means at present in sight, viz: (*a*) proctectomy with circular suture of the divided (healthy) walls; (*b*) proctectomy with transplantation; (*c*) curetting with transplantation on the denuded base (perhaps after a colotomy); and (*d*) gradual (inflammatory, atrophic) dilatation, followed by topical treatment intended to restore to an efficient condition the diseased epithelial lining.

St. Louis, Mo.

SPHINCTEROPOESIS—IMPROVEMENTS AND SUGGESTIONS IN REGARD TO THE OPERATION OF COLOTOMY.

BY AUGUSTUS C. BERNAYS, M. A., M. D. (HEIDELBERG), M. R. C. S. (ENG.),

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[Written for MATHEWS' MEDICAL QUARTERLY.]

In the past fifteen years I have done thirty-one colotomies for rectal disease in my own practice. I have also had opportunities of seeing the results of operations performed by many other operators in Germany, England, and the United States. As my experience with the operation has grown, I have been more and more impressed with the necessity of improvement in the method of operating. The great drawback to the operation is found in the more or less complete incontinence of feces which follows the establishment of the iliac anus. This incontinence renders the condition of our cases miserable, and in some cases the misery has been so great as to make the patients loathsome to themselves as well as to those with whom they associate. I do not wish to be misunderstood as to my position in regard to this operation, and I therefore declare now that I think the establishment of an iliac anus is indicated in all malignant and also in those cases of tubercular, syphilitic, actinomycotic ulcerations and diseases which have caused stricture and fistulous tracts that are not curable by energetic surgical and medical means. I furthermore feel that if I had to choose between an artificial anus and incontinence in the iliac region and one in the anal region, I would unhesitatingly decide in favor of the former.

The method of operating, the technique, has much to do with the degree of incontinence following, and I have noticed a decided improvement in the results obtained by different operators in late years. These improvements are due to the excellent work of Messrs. Allingham, Crips, Maydl, Lauenstein, König, Senn and others, all of which is well known to the class of readers for which this journal is intended. The great improvement which has been made is founded on the recognition of the necessity of preventing the passage of fecal matter into the lower

portion of the sigmoid flexure and rectum by the formation of a perfect spur or by closing the distal end of the sigmoid flexure.

For many years operative methods have been suggested and practiced which had in view the accomplishment of the greatest desideratum in surgery of the artificial anus. This desideratum is the formation of a sphincter at the new opening of the gut. If this object could be achieved, the drawbacks and evils of incontinence would at once be removed. The suggestions in this direction which have been made I fear have been of little practical use. The reason for this failure seems to me to be based on the idea that a sphincter-like action could be formed by utilizing the muscular strictures of the abdominal parietes.

The following descriptions and diagrams are intended to introduce some modifications and new operations which I have devised. I submit them in their experimental stage, and I am fully aware that some of them may require much further development before they will be adopted by practical surgeons. My apology for bringing this unfinished work before the colleagues in this branch of our art is, that in the operations which I have named *Sphincteropoesis* an essay is made in an entirely new direction. Instead of using the abdominal walls, or the muscles and fasciæ of which they are made up, the walls of the intestine itself are made to serve.

The great revolution produced in the general principles of surgery, and an experience of about twenty-five years with the antiseptic and the aseptic method of operative work have left unshaken the greatest of all rules which should govern our work. I refer to the rule that *in our procedures we should imitate as closely as possible the modes which nature adopts in the regulation of diseased or injured tissues.*

The first direct intimation of nature's method I had was given me by the following observation: Mrs. S. came to me from St. Paul in 1889, and had a fecal fistula in the scar of a section made for the purpose of removing diseased appendages. Various attempts had been made to close the fistula, but without avail. I made an inguinal colotomy after Maydl's method. The fecal fistula healed spontaneously after a few months, but the patient grew immensely fat, and a troublesome, very large prolapsus of the sigmoid flexure and ascending colon through the iliac anus developed. I made a resection of the prolapsed portion, remov-

ing fully eight inches of the colon, stitching the distal end of the descending colon into the old fistula from which I had carefully dissected the gut. On examining the resected bowel I found that at its distal end a ring of muscularis had developed, one inch in breadth and three times as thick as the muscular coat of the same piece of bowel at its proximal extremity.

I determined to follow out this very clear indication of nature's attempt to establish an elastic sphincter, and the following operations and experiments are the first attempts to assist nature in the accomplishment of her own work.

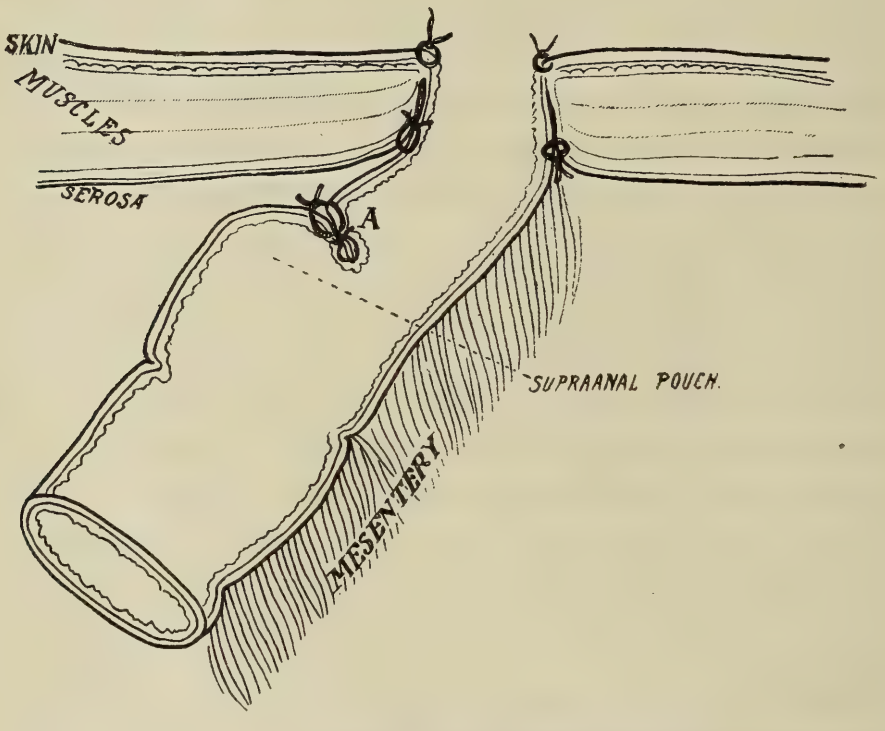

FIG. 1.—A, Double row of Lembert stitches, making the internal supra-anal spur.

It is well known that above the sphincter ani proper in the rectum the gut has a pouch which bulges backward into the excavation of the sacrum. This pouch lies behind and above the sphincter, and in most instances is well defined by a semilunar fold bordering on it above and below. It is into this pouch the feces or scybalæ are first received, and only when this pouch is full the act of defecation is performed by the combined action of the abdominal press and the levator ani muscle. The pressure of the contents is not upon the sphincter at all, but is directed into

the pouch until the voluntary abdominal press starts the act of defecation.

The first step in my operation, and a most important one, is the formation of this pouch, which I call the *supra-anal* pouch. Its object is to prevent a rush of feces directly against the anal opening, and to form a receptacle similar to the one above the sphincter ani muscle in the rectum, thus imitating the normal physiological and anatomical arrangement. This object can be easily carried out, as is shown in Fig. 1, by making a supra-anal internal spur of a semilunar shape. By means of a double line of sero-muscular sutures across the gut, a spur projecting one half inch into the gut at its middle can be established. The first line of sutures should consist of six sutures one eighth of an inch apart and including one half inch of serosa and musculosa, parallel to the long axis of the gut. The second line should consist of ten sutures one eighth of an inch apart completely burying the first line. In some cases I have put a few stitches of a third row over all where the gut was found of large caliber. The spur must be so made on the side opposite the mesenteric attachment that it points toward the mesenteric tenia.

This simple addition to the operation of colotomy appeals so directly to the surgeon that I will desist from any further argumentation or recommendation. I merely desire to state that I have tested it in two cases, and that it appears to answer its purpose admirably. It is understood that this spur must be made about an inch and a quarter or an inch and a half above the point where the anus is to be made, and of course must be made before the gut is opened.

Sphincteropoesis. I have coined this name from the two Greek words, *σφιγγω*, to grasp, and *ποιησις*, action, work, manufacture, operation; the word literally translated therefore means the manufacture of a grasper or sphincter.

The first method that I devised is a simple one, and one which will always succeed in making considerable of an elastic ring at the margin of the artificial anus. Figs. 2 and 3 illustrate the operation. The first step is difficult, in some dogs much more so than in others, and more so than in man. It consists in separating the mucosa from the two outer coats for a distance of three eighths of an inch around the entire circumference of the

gut. The next step is the introduction of eight or twelve finest Lembert sero-muscular sutures parallel to the axis of the gut, in such a manner that a little more than one half an inch of the

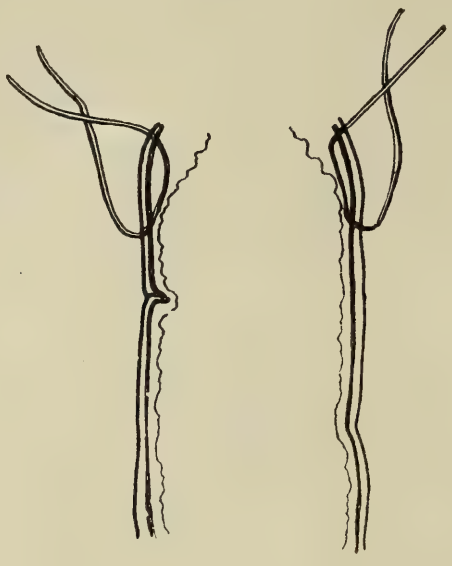

Fig. 2.

serous and as much of the muscular coat as was left attached to the serosa, after peeling off the mucosa, is curled down and forms a ring or sphincter at the point of its attachment to the abdominal wall externally and to the mucosa on the inside. The mucosa

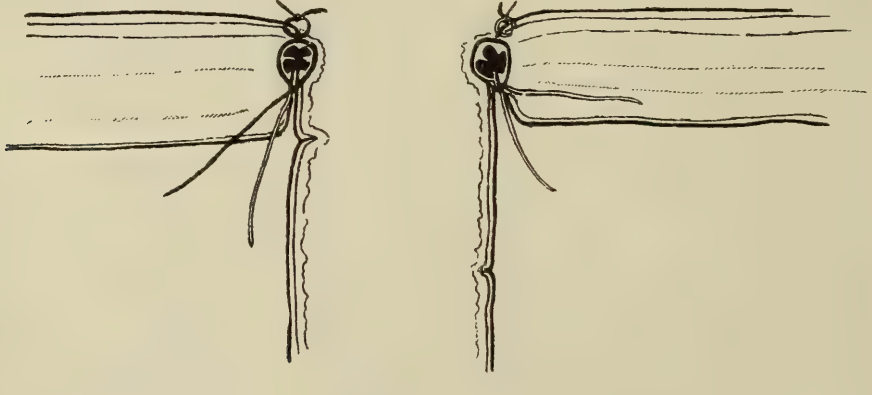

Fig. 3.

is then drawn outward so as to cover the curled-up coats and is united to the skin by numerous fine sutures. The whole operation must be done with most careful attention to asepsis, because healing by first intention is essential to success. I have never

seen sloughing of the curled-up tissues when the operation was performed after this method.

The second method will be readily understood by a glance at the illustrations, it being only a higher development of the first.

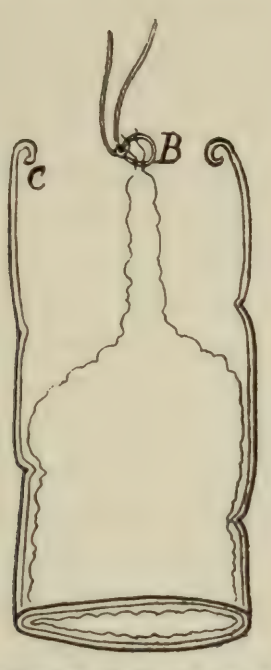

FIG. 4.—B, Mucous membrane tied up to prevent escape of contents. C, End of serosa and muscularis curled down.

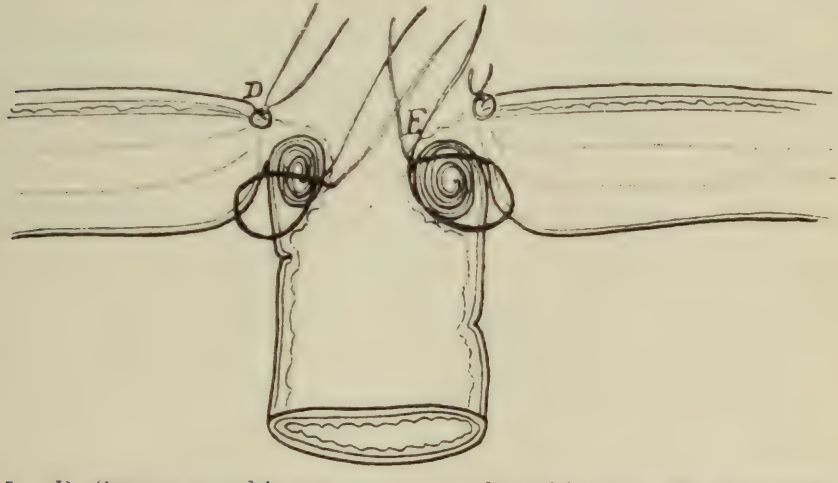

FIG. 5.—D, Suture attaching mucosa over the sphincter. E, Suture attaching sphincter to parietal peritoneum.

It has for its object the formation of a sphincter, which is almost a perfect imitation of the normal sphincter ani, and is illustrated in Figs. 4 and 5. I have only performed this operation a single

time on a large dog, but, owing to the fact that the dog escaped and got rid of its muzzle, thus being able to gnaw at the wound, the experiment was a failure. I fear that this almost ideal procedure will be so difficult and tedious in its execution that it will be impracticable. The dissection of the mucous membrane for a distance of two inches up the gut without tearing it is a very tedious process in a dog, and I think would be so in man, and I am afraid that even if it should succeed the nutrition of the rolled up tissues would be so imperfect that atrophy of the non-striated muscular fibers might follow. It is a well-known fact that ischemia is detrimental to the life of striated fibers, and by analogy I judge it might also prove so in the non-striated fibers. The result would then be a rather inelastic fibrous ring instead of an elastic muscular one.

The object of the sphincteropoesis then, even in case of a fibrous instead of a muscular ring, would not be totally illusory. It seems probable to me that if a supra-anal spur and pouch were formed the dreaded incontinence would not be as troublesome as we are accustomed to see it. Defecation would even then be subject to the will, because without an effort of the abdominal press the feces would not escape from the pouch above the fibrous ring and through the latter unbeknown to the patient.

This second method of sphincteropoesis can not be recommended as it now stands for a trial in human beings, and I feel as much as any one that considerable experimental work on lower animals should be done before testing its efficiency in man.

St. Louis, Mo.

REPORT OF TWO CASES OF INTESTINAL OBSTRUCTION.

BY JOHN A. WYETH, M. D.,

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[Written for MATHEWS' MEDICAL QUARTERLY.]

CASE 1. (Complete Occlusion of Ileum by Inflammatory Adhesion Band, caused by Perforation of Sigmoid Flexure by a Chicken Bone.) M. H. R., unmarried woman, aged fifty, was admitted to Mt. Sinai Hospital, October 5, 1893, with the subjoined history. September 22d she was attacked with vague abdominal pains, accompanied by headache, slight nausea, and constipation. These symptoms persisted with varying intensity for a week, and then chills, fever, and sweating were added. The pain, while at no time localized, was severe and colicky. Vomiting set in, which soon became foul and stercoraceous. Upon admission to the hospital she presented all the symptoms of intestinal occlusion. She had had no movement of the bowels for five days; there was severe tenesmus; the urine was scanty and abdomen moderately distended. Operation was immediately undertaken, under ether. A mass could be plainly mapped out through the abdominal parieties, lying to the right and below the umbilicus, while a hand in the rectum also discovered a hard, well-defined tumor. A high enema was returned, bringing no appearance of blood. The diagnosis, based upon the history given and the physical examination, was acute intestinal obstruction situated in the small intestine. The rapid course, acute pain, early occurrence of severe vomiting, scanty urine, early but not excessive abdominal distension seemed to warrant the diagnosis that the seat of obstruction was in this portion of the bowel. Operation, chloroform. An incision was made through the left linea semilunaris, and upon entering the peritoneal cavity a quantity of clear, straw-colored fluid welled up. The greater portion of the mass of small intestine was found to be swollen and distended, while the smaller portion of the mass was completely collapsed. A systematic search for the point of obstruction was now instituted, the exposed bowels being well enveloped

in hot sterilized gauze. Low down in the pelvis was found an adhesion band that completely occluded the lumen of the ileum; this being loosened by the finger-nail, the gas and other contents of the distended gut were seen to pass into the collapsed portion, which resumed its normal caliber. The raw surfaces exposed by separation of the adhesions were carefully dusted with non-conglutinating iodoform and returned to the abdominal cavity. A strip of iodoform gauze was carried down to the site of adhesion and brought out at lower angle of wound for capillary drainage, the remainder of wound being closed with interrupted sutures of silk-worm gut, and the operation concluded with a dry dressing. The time consumed was one hour and fifteen minutes.

The patient did not rally, and died from shock four hours after the operation. The autopsy disclosed the cause of the occlusion to have been a chicken bone (rib) which had perforated the rectum just behind the base of the bladder. Localized peritonitis began at the point of invasion of this cavity, and the adhesions had caught a loop of the ileum, completely closing its lumen. This patient had well-marked symptoms of complete obstruction for four days before I saw her, and operation should have been done on the first day of these symptoms. While the chances were very much against her by reason of the great prostration resulting from intestinal occlusion of four days' standing, I advised operation at once. Had she been operated on earlier a successful issue would have been more probable.

Case 2. (Invagination of Several Feet of the Ileum, the Cecum and Ascending Colon into the Transverse and Descending Colon and Rectum; Death.) M. B., aged nineteen, Russian, admitted to medical ward, Mt. Sinai Hospital, November 25, 1893. Ten days previous, while at his work, he was suddenly seized with pain and cramps in abdomen, followed shortly by vomiting and diarrhea. Medical aid was summoned, but symptoms persisted with increasing severity. The stools were small, watery, and often black or greenish in color, occasionally streaked with blood. For the past three days the symptoms have been much worse, vomiting a greenish fluid four or five times daily; great weakness and anorexia, emaciated, tongue coated, lungs and heart negative, spleen and liver not enlarged, no history of syphilis, no cancerous family diathesis. Three years ago patient was in an Austrian hospital

with similar symptoms. The history and treatment of the case while in medical ward was as follows:

November 25th: Temperature and pulse normal; vomited greenish fluid; several small stools containing no trace of blood. Given whisky and Magendie's solution.

November 26th: Urine contains trace of albumen but no casts; continues to vomit the greenish fluid; blood appeared in fluid stools. Subnitr. bismuth and extr. opii suppositories.

November 27th: Passed fairly good night; vomiting began at 8 A. M., green color, but not fecal; bloody stools; transferred to surgical ward. An examination now shows distended abdomen, a large movable mass in left hypochondrium, tender and dull under percussion. As high as the hand could reach in the rectum a large sausage-shaped tumor could be felt, around which the hand could sweep.

Diagnosis: Ileo-cecal intussusception. Immediate operation advised and accepted. Ether. The abdomen opened through median incision and the intussusception found to comprise the whole of the colon and several feet of the ileum, the ascending and transverse portions being the intussusceptum, the sigmoid and rectum being the intussuscipiens. Various attempts were now made to reduce the invaginated gut. Kneading and drawing on the outer tube or sheath, even with an assistant's hand in the rectum, proved futile. The intussuscepted bowel was then incised and found to consist of three cylinders. The serous surface of the entering or middle layer was found so firmly agglutinated to the serous surface of the returning or inner layer as to preclude all possibility of reduction. The patient, already in shock, was now entering into a condition of profound collapse, and, as relief was impossible, the incisions were rapidly closed with running silk suture for the intestines and silk-worm gut for abdominal wound. Death occurred five hours after operation.

NEW YORK.

KRASKE'S OPERATION, WITH REPORT OF CASES, AND THE UTILIZATION OF AN ENLARGED MURPHY BUTTON FOR THE APPROXIMATION OF THE DIVIDED ENDS OF THE RECTUM.

BY H. O. WALKER, M. D.,

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[Written for MATHEWS' MEDICAL QUARTERLY.]

A patient with cancer of the rectum has but a short time to live, as a rule. We rarely see such a case until its occupancy has become so extensive that our treatment can only be in the line of palliation. Its origin and development is so insidious, and as a rule quite painless, that it is only when its presence becomes obstructive to the function of the alimentary outlet and painful by pressure that the patient seeks relief; and even then it is often treated as a simple case of "piles," too often the diagnosis of what may affect the rectum.

As we find these cases we are left with the alternative of three methods of surgical procedure, namely, internal proctotomy, excision, and colotomy; and, as the title of this paper signifies a certain method of excision of the rectum with a suggested modification, I shall not deal with the details of pathology, symptoms, and diagnosis, but shall confine myself briefly as possible to the subject-matter.

Excision or extirpation of a portion of the rectum has been attended with frightful mortality, as have many other capital operations, largely due to the indiscrimination of the operator and defective antiseptic precautions. Proper selection and rigid asepsis make the operation justifiable. I have recently made two operations of excision of a portion of the rectum for cancer by the Kraske method, which are as follows:

CASE 1. This was a gentleman, aged forty-eight, operated upon in June, 1893, who had had two other operations done for the same cause, but in each instance there was a return of the disease. At this time there was considerable involvement of the rectum, extending well up and to nearly one and a half inches above the

sphincters. The location gave an excellent opportunity to leave the sphincter intact, a result much to be desired. I made the operation as follows: First, making a free incision downward from above the second sacral vertebra to within an inch of the anus, when the attachments to the coccyx were divided, the latter being rapidly cut away with Keen's rongeur forceps. Finding more room necessary, the sacro-sciatic ligaments were divided and the last sacral vertebra cut away with the rongeur. The opening was now sufficiently large to remove the growth, cutting away about three inches of the rectum. In attempting to approximate the cut ends of the rectum with sutures I met with great difficulty. In fact I only partially succeeded in so doing.

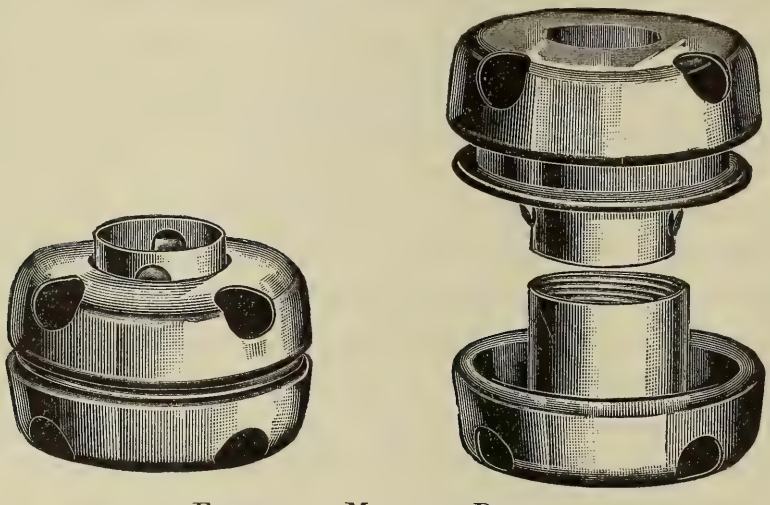
Case 2. I operated upon a farmer, aged thirty-two, in July, 1893, for a cancer which had existed for more than a year, with but little inconvenience up to a short time before I saw him. The growth came down to within two inches of the sphincters. The operation was made as in the first case, removing about two inches of the gut. Here again I met with the same difficulty in approximating the cut ends of the intestine.

I would here state that the operations were done with but little hemorrhage. The peritoneal cavity was invaded in both instances. Both cases made good recoveries. They were not entirely free from sepsis, though the strictest aseptic precautions were observed. In each case there was leakage of fecal matter through the cut.

My experience in operating for relief of cancer of the rectum, although not extensive, dates back to 1878, when I did an extirpation of the rectum upon a man aged forty-eight years, removing about four and a half inches, including the sphincters. I have also done internal proctotomy, with partial removal of the growth, as well as inguinal and lumbar colotomy. All of these methods have their place and must be chosen according to their feasibility. Kraske's method, when the malignant growth is high up, affords the best opportunity for its removal, and at the same time preserves the sphincters when they are not involved. A colotomy should never be done when this (Kraske's) method is possible. A colotomy must be followed by a trail of disgust.

In considering the difficulty of approximating the cut ends of the rectum, it has occurred to me that the use of an enlarged

Murphy button, say of one and a half to two inches in diameter, which I have had made, would do away with the difficulty. It would be easy of adjustment and cause complete control of fecal matter, preventing its escape into the surrounding tissues, an accident that would be well-nigh unpreventable by any suture



Enlarged Murphy Button.

method. The manner of adjustment would be similar to that of ordinary end-to-end approximation in resection of the intestine, with the exception of using two stout ligatures, as Murphy does in adjusting his cholecystotomy tube; that is, before introducing the hemispherical bodies, first pass the two ligatures through the little opening at the top half of the button and return them through the invaginating cylinders, and then through the lower cylinder downward out through the anus. The use of the ligatures gives better purchase for invaginating the cylinders and approximating the half-buttons. Aside from this the ligatures should be left *in situ* until pressure atrophy has caused the button to loosen its attachment, and is thereby much more easily removed through the sphincters by traction on the free ends of the ligatures. It must be obvious to you that the use of the button in this operation has a double purpose: *First*, it makes practicable the direct union of the divided ends of the rectum. *Second*, it is an efficient antiseptic by preventing the escape of the fecal matter, and permits of complete closure of the external wound.

In this connection I would ask to say a word regarding the use of the Murphy button, which is now attracting the attention

of surgeons throughout the world, by reporting *a case in which I did the first successful end-to-end approximation of intestine by Murphy's button* upon a lady, aged thirty-three years, sent to me by Dr. Dewar, of Essex, Ontario. She entered St. Mary's Hospital December 6, 1892, was operated upon December 8th, and left the hospital January 21, 1893. The history is as follows:

About eight months previous to my seeing her she had some acute abdominal trouble that necessitated a laparotomy, which was followed by a fecal fistula in the right iliac region. Three different efforts had been made by a very competent surgeon to close the fistula by suture, but without success. She had become very much emaciated, with three large bedsores, and a victim of the morphine habit. The opening in the iliac region was ovoid in shape, two and one half inches in length and one and one half inches in width. I dissected out its cicatricial border and made a free liberation of the attachment of the intestine. I then excised that portion of the intestine containing the fistula, which was about four inches in length, and made the end-to-end approximation. In adjusting the halves of the button great care must be exercised to prevent eversion of the mucous membrane, by introducing the running thread or puckering-string close to the end of the bowel, and when you come to the two layers of the peritoneal mesentery you overlap them by a loop-stitch, which prevents the muscular layers of bowel coming in contact, thereby making, when the suture is drawn taut over the cylinder of each bowl, a continuous peritoneal surface for approximation when the two bowls of the button are invaginated. In closing the abdominal wound I thought it best to introduce a glass drainage-tube, which was left in seven days. Although her recovery was slow, it has been satisfactory, and, from letters received from her since her return home to Canada, she reports that she is as well as ever. The button was never found, although we had given strict orders that each evacuation be carefully examined, and supposed that it was done, yet we learned that no attention was paid to it for several days after the first seven days, and it must be presumed that it was during this time that it passed, as she has not given any evidence whatever of disturbance from its presence. Time of making operation, seven minutes after entering the peritoneal cavity.

DETROIT, MICH.

THE RESECTION OF THE RECTUM FOR THE REMOVAL OF MALIGNANT GROWTHS.

BY HENRY O. MARCY, A. M., M. D., LL. D.

[Written for MATHEWS' MEDICAL QUARTERLY.]

During the last decade the chapter of surgery which has presented the greatest interest comprises the various pathological lesions incident to the abdominal cavity. Prior to this a comparatively few specialists held sway over the as yet doubtful field of intra-abdominal growths, chiefly pertaining to the pelvic organs of woman. Under the stimulus given to research by the splendid contributions of the so-called gynecic surgeons every abdominal organ has been carefully studied anew, both as to its anatomical and pathological conditions, from the special standpoint of operative surgery, until now it may be justly questioned, from a comprehensive rather than a conservative point of view, if abdominal operations are not altogether too frequently undertaken by many lacking both the requisite skill and experience.

No subdivision of the subject is of greater importance than that relating to intestinal surgery, and inasmuch as many of its problems are still held *sub judice*, every contribution upon this subject is gladly welcomed. All portions of the intestinal tract are liable to the invasion of malignant growths, and the rectum has long been recognized as the part very commonly involved. Indeed this location offers the most favorable field for the early detection of the disease and the easy study of the changes incident to its development. On this account the literature of the subject is very ample, and he who would add to it should question well his reasons therefor.

Since it is clearly demonstrated that cancer is first a local disease, and early thorough eradication gives promise of further immunity from its recurrence, the detection of malignant growths becomes of the first importance in order to secure their prompt removal. Although cancer of the rectum is generally rapid in its development, the sufferer from it usually consults his physician while the disease is yet in its incipiency. However, when the part invaded is above the peritoneal reflection, the opening

of this portion of the abdominal cavity for the removal of a section of the intestine has been attended with the gravest dangers, because of the infection of the peritoneum with the ever-present *Bacillus coli communis*. The normal adjustment of the lower bowel to the adjacent pelvic structures renders it comparatively fixed, and even when cancer is limited to that portion of the intestine below the peritoneal reflection its exsection is rendered extremely difficult, and the resulting cicatricial repair leaves a most unsatisfactory deformity, imperfect in function and painful in character.

We are indebted to a number of innovators in this field of surgery for instruction of the greatest value; especially to Kraske, who demonstrated that, by the removal of the coccyx and a portion of the sacrum, it was possible to have a surgical field open to inspection and manipulation, attended with far less difficulty than had been previously supposed. In this way it has been found possible to free the lower bowel from its attachments, including even a considerable part of the sigmoid flexure, and transplant it by the external attachment of the part after having excised some inches of the distal end of the bowel. The results, however, have proved far from satisfactory, even if the disease has not returned.

For these reasons the more common practice of the best surgeons of to-day is to treat this class of sufferers by colotomy (the left inguinal region for many reasons is to be preferred), and content themselves with the result obtained in the relief of pain and slower progress of the disease resulting from the rest which comes from the non-use of the part. This latter procedure is manifestly unsurgical, and is chosen as the least of evils, with the certain knowledge of the ultimate doom of the patient afflicted with a necessarily painful and progressive malady of the most distressing character. Owing to the extreme, almost necessary infection, when the operation for excision of the diseased parts is undertaken as a primary one, it is well to consider if we are justified in advising it.

The object of this paper is to present for critical consideration the operative procedures for the removal of cancer of the rectum, involving that portion of the bowel above the peritoneal reflection, by the following method:

As soon as the diagnosis is established, while the invasion of the parts is yet limited and local, inguinal colotomy is to be performed. The operation must be executed at two different stages, that is, a loop of the descending colon is to be fixed in the abdominal wound and there allowed to remain for several days, until the peritoneum is shut off by adhesive inflammation, before the intestine is opened. Performed in this way, colotomy is an operation of comparatively little danger. The lower segment of the bowel is thus put at rest, emptied of its contents, and easily disinfected.

The patient having been prepared in this manner for the major operation, the various steps for the removal of the diseased intestine are as follows, carefully observing all the modern aseptic conditions. Incision is made in the median line posteriorly to a point just below the end of the coccyx. The coccyx and a sufficient portion of the sacrum are removed to permit ready access to the bowel. The intestine is first freed posteriorly for about two thirds of its circumference, and the peritoneal cavity is opened sufficiently to bring the intestine into easy manipulation. Having secured the vessels, which are usually of considerable size and number, the next stage of the operation is to divide the bowel transversely at the lower border of the disease. This can be, in a general way, defined by the finger introduced through the sphincter. The division having been made, the bowel is incised posteriorly upon its longitudinal axis for the purpose of exposing the diseased structures, and this procedure makes it somewhat easier to complete the dissection of the intestine from its anterior attachment, which, in the male, is the more difficult because of the intimate relationship of the parts to the prostate and the base of the bladder.

When this dissection is effected, the bowel is divided transversely above that portion which has been invaded by the disease. A further division of the meso-rectum is now made sufficient to loosen the attachment of the intestine, so that its upper portion may be readily brought down to the line of its inferior division. The ends of the bowel are now joined by the method which meets the surgeon's approval. It may be sutured without special difficulty. In the illustrative case appended I used with satisfaction the large Murphy button, reinforced with

a line of sutures. The divided ends of the intestine having been coäptated, the peritoneal opening must be sutured to prevent prolapse of the small intestines as well as to cut off the peritoneum from infection. The divided meso-rectum of that portion of the intestine which has been transplanted is to be reattached posteriorly by buried continuous sutures, and the entire wound may be thus closed without drainage.

The advantages of completing the operation in this manner are obvious; coäptation and fixation minimize the danger of hemorrhage and leave the parts in approximation for speedy agglutination and repair. If the coäptation button is used, its lower segment is held in control by a strong silk ligature passed through its openings. This is the more necessary since peristalsis is wanting for its ultimate extrusion.

The advantages obtained from this method of operation are manifold and apparent:

1. The radical removal of the disease, which, when performed at an early period, gives expectation of further exemption from it.

2. The sphincter and the anal structures are retained uninjured in character and function. The external tissues are normally approximated, and the lesion of the sacrum gives very little, if any, permanent disability.

3. A subsequent operation for the restoration of the intestine divided in the colotomy, and its replacement in the abdominal cavity, restores the bowel in its continuity and function.

The following case, reported to the Surgical Section of the Suffolk District Medical Society at its November meeting, is in illustration of this method:

W. S., aged forty-six, merchant. In good health until the early part of the summer of 1893. First noticed a slight tenesmus and pain at stool, with a little bloody mucus, some time in June. Was first seen by me in July. Quite two inches above the anal aperture, upon the anterior wall of the rectum, was a well-defined mass of infiltrated tissue, of irregular ovate shape, an inch or more in its longer diameter, the upper border of which was reached by the finger with considerable difficulty. The diagnosis appeared all too evident, but its location rendered surgical interference seemingly unwarranted.

Upon my return to the city in the early part of September, I found that the growth had been so rapid that the entire circumference of the rectum was invaded, and much suffering was experienced on account of the stenosis. Blood in considerable quantity was daily lost; and it seemed a plain duty at once to advise colotomy. He accordingly entered the hospital on the 12th of September, left inguinal colotomy being performed the same day. He was discharged the 26th, much improved, free from pain, but still losing daily a considerable quantity of blood. Notwithstanding various measures were tried to control the hemorrhage, it gradually increased to such an extent that danger to life from this cause alone seemed immediate and imminent. He was readmitted to the hospital on the 17th of October, and a modified Kraske operation was undertaken for the removal of the diseased portion of the rectum. To this end an incision was made posteriorly, commencing about an inch from the anal outlet and carried upward on the median line upon the sacrum. The coccyx and two fifths of the sacrum were removed, allowing room to dissect the rectum from its attachment, dividing posteriorly the meso-rectum and entering at once into the peritoneal cavity. In this way sufficient length of the bowel was brought down for easy manipulation.

The rectum was now divided two inches above the anus, and the constricting diseased portion split open upon its posterior border, for the double purpose of ascertaining the limitation of the disease and to aid thereby the careful separation of the bowel from its anterior attachments, which to the base of the bladder were everywhere pronounced. The rectum was then divided above the growth, the disease having invaded about four inches of the bowel. Quite a number of vessels were divided in the section, but they were easily secured.

During the summer I had profited by the experiences and instruction of Dr. Murphy, of Chicago, in the use of his anastomosis button. These were reinforced by my own experimental studies upon animals. I had been indebted to Dr. H. O. Walker, of Detroit, only a few days previous to the operation, for the suggestion that the button might be used advantageously in the restoration of the continuity of the rectum, although it had never been applied for this purpose. The ends of the larger-sized

button were adjusted in the divided extremities of the bowel and compressed. Owing to the thickness of the rectal wall (the muscular coat of the upper portion being markedly hypertrophied) I reinforced the parts with a continuous suture. I closed, also, the opening into the peritoneum of the pelvic floor with a continuous suture, in order to prevent the prolapse of the small intestine which had appeared in the wound, as well as to cut off the peritoneal cavity from possible subsequent infection. The posterior wall of the bowel was reattached to the divided tissues, and a large part of the wound was closed by several lines of buried sutures. An iodoform-gauze drain was inserted and the dressing applied.

Convalescence was rapid and uneventful, the temperature scarcely reaching 100°. The button was removed the twelfth day with a little difficulty, not having freed itself quite entirely from its attachment; but its removal was hastened, because pressure of the button upon the neck of the bladder caused discomfort and some difficulty in urination. There is a fistulous opening posteriorly at the site of the union of the bowel connected with the yet unclosed wound. The only ill effect noticed from the necessarily free opening of the sacral canal has been a marked hyperesthesia of the cutaneous surfaces for a considerable distance above and upon either side of the wound. The patient has improved rapidly in his general condition and in restoration of color, and has been sitting up and walking about his room for a week. He was discharged from the hospital November 5th, the twentieth day after the operation.

It will be interesting to note the subsequent history of the patient, the cicatricial closure of the wound with the patency of the bowel maintained, and the possible return of the disease. So far as I am able to determine, the disease was limited to the intestine, and no enlarged glands were found.

January 1, 1894. The fistulous opening has closed, the hyperesthesia and tenderness over the sacral region has disappeared. The inner portion of the bowel is marked by an elastic constricting ring, readily admitting the finger. There is no evidence of the return of the disease. The general health is very greatly improved, and Mr. S. is engaged in light clerical duties.

Boston, Mass.

Society Reports.

LOUISVILLE SURGICAL SOCIETY.*

Stated Meeting, Dec. 11, 1893, Dr. A. M. Vance, President, in the chair.

Dr. Jas. S. Chenoweth (Distension of Gall-Bladder during Typhoid Fever; Probable Biliary Calculus; Operation; Recovery): This little boy, twelve years old, was in fair health until a year and a half ago. He then complained of pain in the epigastrium. He was examined by a surgeon of this city, and declared to have commencing Potts'. A jacket was applied and worn for one year. For the next six months he had no treatment, but continued to have occasional attacks of pain, had no appetite, and showed great disinclination to exert himself. About this time his sister was taken sick with typhoid fever, and he, occupying the same room, contracted the disease just as she was convalescing.

His attack was quite severe, the temperature ranging from 103° F. to 105° F. Delirium developed in the latter part of second week and lasted for four days. He then began to improve, and in the latter part of the third week his highest temperature was 102° F., pulse 100.

On the next day, Wednesday, he was seized with a violent pain in abdomen. His bowels had moved, and examination revealed no tumor, not much general swelling, nothing in fact to account for his pain. This was controlled by paregoric. On Friday the pain returned severely, but I was out of town and did not see him until Saturday. He was then bathed in a cold sweat, temperature 105° F. in mouth, pulse 130, and very weak. In the right side of abdomen was a globular swelling which extended from the ribs to one inch below the umbilicus. It was tense and fluctuating, and its dullness continuous with that of liver.

Two hours later I opened the abdomen by an incision one and one half inches long over the most prominent part of tumor, which you see was above and to the right of umbilicus. This brought us down on a tongue of the liver which had been dragged

*Stenographically reported for MATHEWS' MEDICAL QUARTERLY by C. C. Mapes.

down to the umbilicus by the enormously distended gall-bladder. The little fellow was too weak to stand an extension of the incision below this, so a hypodermic needle was introduced directly through it into the gall-bladder and enough bile and mucus removed to relieve the extreme tension. Two sutures were then put in, one at either end of incision, and a strip of gauze packed down on the needle puncture. He was then put to bed almost pulseless, although he had only been on the table three or four minutes.

There was very free seepage of bile-stained fluid through the needle puncture during the night, with corresponding improvement in pulse and temperature. On Sunday an aspirating needle was introduced and two ounces of bile-stained fluid removed.

On Monday, the second day after operation, a trocar was introduced through needle tract and ten ounces of fluid removed. The gall-bladder was then drained for two weeks by a strip of gauze and a small rubber tube carried directly through this thinned strip of liver tissue, which was now closely adherent to the abdominal wall around my opening.

Two weeks later, his fever having gradually subsided, he was seized with the same old pain, the gall-bladder became again distended, and his temperature went to 104° F. I had no instruments with me at this visit, but being satisfied with the firmness of the adhesions at the site of the former operation, I punctured the gall-bladder through these with the small blade of my pocket-knife, giving exit to a large quantity of fluid. This drainage was kept up for one month, when, the boy having fairly regained his strength, the wound was allowed to close, it being agreed that when the gall-bladder refilled we would open it up well and remove the stone, which was evidently impacted in the cystic duct.

Some ten days or two weeks later the boy had a sharp attack of pain lasting two days and accompanied by jaundice, which had never before been present. There was no distension of bladder at this time, and he has been perfectly free from pain or discomfort ever since.

DISCUSSION.

Dr. W. L. Rodman: How much fluid was evacuated?

Dr. Chenoweth: The total amount of fluid removed was one pint.

Dr. A. M. Cartledge: I think the case reported by Dr. Cheno-

weth is one of the most interesting that I have ever heard of in the way of gall-bladder surgery. I only saw the patient once, and that was the day of the operation; the boy was in the third week of typhoid fever, temperature 105° F.; tumor was large and plainly fluctuating. I think Dr. Chenoweth was very bold in attempting to do any thing in the way of operation. I told the doctor that I would stand by him and give him all the assistance I could. Dr. Butler administered the chloroform. An incision was made over the most prominent part of the tumor (there were no adhesions), and came immediately down upon the liver. The incision was made very quickly, and as the gall-bladder could not be seen he took an aspirating needle and, pushing it through the liver, drew off the characteristic fluid, as he stated, from the gall-bladder. I have seen this condition before. While the gall-bladder may be enormously distended, it does not always extend below the margin of the liver. Two or three strips of gauze were used for drainage, and the patient was removed from the table nearly in collapse. It strikes me that an extremely interesting feature in this case is the age of the patient and the diagnosis of the trouble arising during the course of typhoid fever. These cases nearly always result from calculi in the cystic duct obstructing the flow of normal secretion from the gall-bladder. It is very common to find the gall-bladder enormously distended, not necessarily with bile, but with the mucous secretion of that viscera. In this case there was evidently gall-stone formation, which during the last attack of pain passed through the common duct. The intention was, when the patient became stronger, if there was no improvement after aspiration, to enlarge the incision and do a cholecystotomy; but this operation has never been necessary, as the result has been every thing that could be desired. There is no doubt that the boy's life was saved by the conservative measures adopted by Dr. Chenoweth. I believe that the spinal symptoms observed some time ago were due primarily to the trouble existing in the gall-bladder. A careful examination reveals no evidence of Potts' disease.

Dr. Geo. W. Griffiths: I have nothing to say concerning the case except that I can discover no evidence of spinal trouble.

Dr. Chenoweth (Operation for Obstruction of Bowels; Double Pyosalpinx; Recovery): I have here a specimen consisting of

tubes and ovaries removed last Monday. I saw the case with Dr. Fallis on the preceding Friday, the history being that there was obstruction of the bowels. It had then been ten days, according to the patient's statement, since she had had an action of the bowels. There was no vomiting, except after taking purgatives, or other symptoms of acute obstruction, and some gas had been passing up to that time. The trouble had followed labor in September. An examination of the pelvis showed a tumor evidently made up of pus tubes, uterus being fixed, and it was supposed at the time that the obstruction was due simply to the pain caused by having an action. She was sent to the Infirmary, and four high enemata given with salts, glycerine, and turpentine; the water returned perfectly clear, and there was no passage of gas, showing that there was obstruction of the lower bowel. Abdominal section was made, and a loop of intestine (sigmoid) was found to be bound down by a mass of adhesions, causing complete obstruction. The adhesions in every direction were very dense and extensive. The operation was very difficult and tedious, lasting over an hour. A pyosalpinx was found to exist on either side, and after separating the dense adhesions both tubes and ovaries were removed. The cavity was packed, both sides, with iodoform gauze to control hemorrhage and secure drainage. This packing was removed at the end of thirty-six hours; her temperature has been normal for four days, and she has done uninterruptedly well.

The case is interesting from the dense adhesions, but particularly from the obstruction of the bowels, which had been gradually developing, but which was complete at time of operation.

DISCUSSION.

Dr. Cartledge: In this connection I want to call attention again to the report I made before the last meeting of the Medico-Chirurgical Society, where I displayed some specimens of pyosalpinx, one the result of infection from gonorrhea, the other the result of septic infection by the streptococci following puerperal fever and abortion.

The patient was a young woman who gave birth to a child in the month of September; this child was immediately the subject of ophthalmia neonatorum of a very violent kind, and the woman,

a month before her confinement, noticed a most violent vaginitis, urethritis, and all the evidences of specific infection from gonorrhea. On the fifth or sixth day after confinement she developed extensive pelvic peritonitis, and has been in bed more or less ever since. I think at the time the doctor did the operation she was taking three to four grains of morphine per day, using flaxseed poultices, etc., for the relief of the cellulitis. The operation was probably hastened by the fact that there was intestinal obstruction, but even a microscopical examination of the specimens will show that extensive disease existed.

Here is a case where the whole contents of the pelvis were matted together in a mass of dense adhesions of great vascularity, and every time an adhesion was separated there was excessive hemorrhage. Even after applying five or six ligatures, embracing the broad ligaments on either side, it was necessary to pack both sides of the cavity tightly with gauze to control the hemorrhage.

Dr. A. M. Vance (Fatal Case of Appendicitis): This specimen is an appendix, result of an operation for appendicitis, and has some points of interest. The patient was a boy, thirteen years of age, who had been ill for six days when I was called by Dr. Drake, of Parkland. There was every evidence of intestinal paresis; opium had been administered, and the patient's condition was so extreme that I operated as soon as I was called; chloroform administered by Dr. Tuley. I found a large abscess sac which seemed to have been walled off, and three or four enteroliths which are hard, almost like calculi. The appendix was necrosed at its distal portion, but seemingly normal above. The tube was pervious. The patient lived from Thursday night till Sunday afternoon, then died, evidently from sepsis. We were unable to move the bowels at all. The enteroliths in this case were the most distinct that I have ever seen. The case rather goes to show that possibly athletic sports or great muscular efforts have something to do with the causation. I have had two cases of appendicitis recently, both giving the history of having been engaged in work requiring great muscular exertion. You will remember the patient I showed at the last meeting of this Society, a baker, who had been in the habit of carrying very

heavy iron vessels across his abdomen, and who developed appendicitis and was operated upon with a perfect result. This boy was quite an athlete, though only thirteen years old, and figured extensively in football, baseball games, etc., exercising very violently. I simply mention these facts, as they may have some bearing upon the causation of appendicitis.

DISCUSSION.

Dr. W. O. Roberts: How much pus was evacuated in the case reported?

Dr. Vance: About a quart.

Dr. P. B. Scott (visiting): I would like to say a few words in regard to the diagnosis of this class of cases from a medical standpoint. In the last case which occurred in my practice there was one feature which, to those who have seen such cases in the past, with a history of typhlitis, perityphlitis, peritonitis, obstruction of the bowels, etc., as we used to call them, would be regarded as peculiar. These cases are now recognized as appendicitis, and it is difficult for us practitioners to decide when to call in the surgeon's advice and when to operate. This patient was operated upon on the seventh day. She had a typical course, or had peritoneal inflammation, then a subsidence of the general acute symptoms under a moderate amount of opium, until on the fourth day there was entire absence of pain. All distensions subsided, bowels had moved well, pulse 84, temperature 99° F., and she slept well for two nights preceding the operation without any anodyne, and altogether her condition seemed very favorable. Dr. Cartledge saw the case in the beginning, and we agreed to temporize. On the fifth day of the progress of the case it was decided that she had appendicitis and must be operated upon. We felt no tumor whatever in the usual site, the abdomen was flat, and there was absolute freedom from pain. Upon deep palpation of the lower abdomen a distinct tumor was detected just about the symphysis pubis. The question naturally occurred to us whether we were right in our diagnosis of appendicitis. She was placed upon the table in very good condition, and while she was being anesthetized, if we were to judge this case from the old standpoint, I questioned if we were doing right in operating. As there was apparently no obstruction of the bowels, subsidence of pain,

and such a general improvement in the case, I confess that I was hardly willing to consent to operative interference; but of course after having solicited surgical aid, and as it was the surgeon's opinion that operation was demanded, I consented. I was astonished when we opened that abdomen through the median line to find extensive peritoneal adhesions, the appendix ruptured, enteroliths escaped into the cavity, a large tumor deep in the pelvic basin, and quite an accumulation of pus. I am glad to say that the patient has convalesced smoothly, and now she is quite out of danger.

The point that particularly impressed me was the difficulty, even at that late moment, in deciding as to the necessity for operative interference.

Dr. Cartledge: Last week I operated upon three cases of appendicitis, with two recoveries and one death. One case was very much like the one reported by Dr. Vance to-night. A young man was operated upon on the seventh day. I thought there were firm anterior adhesions and went down in the usual way upon the tumor. As soon as I reached the peritoneum I found that anterior adhesions did not exist, the tumor lay very far to the right, and I was in contact with fresh peritoneum. My intention was to simply pass my fingers in gently, outline the tumor, which was in the loin, and so make my cut over the tumor in loin. In doing this, owing to the thin adhesions, the abscess was ruptured, freeing about a pint of pus in the general peritoneal cavity. I turned the man on his side and flushed the cavity with ten or fifteen gallons of water, removed the appendix, and packed the abscess cavity well back and to the right with gauze, with two separate strips of gauze draining through the peritoneal cavity. The patient was operated upon Tuesday. His pulse ranged from 80 to 84; temperature was never above 100° F. from that time until the night of his death, which was the following Sunday night. He vomited for the first two days a greenish-looking serum, indicating intestinal obstruction, taking in the mean time ten ounces of milk. The bowels never could be moved. The abdomen was perfectly flat, but there was such an amount of intestinal paresis from the existence of the trouble that peristalsis could not be induced. The pulse began to go up on Saturday; I saw him Sunday morning with a perfectly flat abdomen, but

every effort to move the bowels had failed. I then took a pair of scissors and cut an opening into the colon, virtually doing a colotomy through the original incision. A large amout of feces escaped without any force from behind and very little gas, showing, as I say, the absence of peristalsis. This seemed to revive him a little.

I think if this patient had been operated upon sooner he might have gotten well. He never had any peritonitis, and the pulse remained almost normal for four days after the operation.

In the case reported by Dr. Scott, as he says, the tumor was located just above the symphysis pubis, slightly to the right. The first symptoms were indicative of obstruction of the bowels. Dr. Scott did not believe that the trouble was appendicitis until just before the operation. A median section was done, and the whole pelvis was found a mass of adhesions; the appendix had ruptured, and there was a quantity of pus in the cavity. About twenty gallons of water was used in washing out the cavity; it was then found that rupture had taken place close to the base, and the pus was probably forced back into the colon through the ruptured appendix. It is usually the case that rupture takes place near the point, but this was right at the base.

The failure to obtain a movement of the bowels after operation is usually the result of intestinal paresis from one coil of the intestine adhering to another, so that after relieving the condition you may lose the patient. I believe that early operation is the thing in appendicitis. Operation is demanded just as soon as the diagnosis of appendicitis is made. I see the necessity for this more and more every day, and, had I known what I now know of appendicitis and insisted upon earlier operative interference, I believe that my results would have been more favorable in several cases.

Dr. Roberts: There are two points in connection with what Dr. Cartledge has said that I would like to speak of. One is rupture into the colon, or rupture near the colon where the pus gets back into the cavity of the gut. I had a case a short while ago in which there was quite a large abscess with a gangrenous condition of the appendix. After washing out this abscess cavity thoroughly I closed the opening, and two days afterward the patient had an immense evacuation of pus from the bowels. I

think there must have been a pint to a pint and a half of pure pus in the stool. There was no rupture into the peritoneal cavity in this case.

Another point in the case reported by Dr. Cartledge is the paresis of the bowel. I would like to ask whether or not any one has ever tried physostigma for such a condition. In connection with tr. nux vomica it has such a good effect in intestinal obstruction from fecal impaction it *might possibly* do some good here. I have had four cases lately of obstruction of the bowel from fecal impaction which resisted every thing excepting physostigma given in connection with the tincture of nux vomica. In two of them physostigmine was given hypodermatically. In one case obstruction had lasted for a week. I was satisfied that it was fecal impaction. He had taken quite a large quantity of castor oil, and had retained it for over twenty-four hours and then vomited. He had taken a number of other things, and also frequent enemata had been given without any effect. I gave him physostigma and nux vomica, five drops each, every three hours for twelve hours, when the bowels moved freely and he got well.

Another case I saw with Dr. Block, a young girl twenty years of age, who had obstruction of the bowels extending over a period of six days. There was considerable abdominal distension, temperature 99° F., pulse 120; she was vomiting incessantly, and there was a decided fecal odor to it. We gave her physostigmine hypodermatically in $\frac{1}{100}$ grain injections every three hours, and after taking six doses she had a good evacuation of the bowels and recovered.

I have another case under treatment now, a man who last Thursday afternoon was seized with intense pain in the left lumbar region in front and behind, his bowels being completely locked up. He had taken before I saw him large doses of epsom salts without any relief at all. He said that he could not take castor oil, so I ordered for him two ounces of tasteless castor oil, but afterward learned that the druggist had sent castoria. I saw the patient the next morning, and as there had been no action of the bowels, I then gave him two ounces of castor oil—gave it myself to be sure that there was no mistake about it. I saw him again this morning, thirty-six hours after he had taken the castor oil, and still there had been no movement of the bowels; he had

been taking some opium for the relief of pain. I then gave him physostigma and nux vomica; he was nauseated but did not vomit any. The abdomen became very much distended and tympanitic, pain still referable to the left lumbar region. This afternoon, after taking four doses of physostigma and nux vomica, he had a large evacuation, and it was reported to me to-night that he is doing very well. I got the idea of using physostigma first from Dr. Cottell, in a case that I saw with him of obstruction of the bowels, which had existed for five days with intense pain, and in this case the pain was on the right side. The patient had gone along with no improvement at all, and I was inclined to operate upon him under the impression that it was a case of appendicitis. Dr. Turner Anderson saw the case with us, and he decided that it was not a case for operation. At Dr. Cottell's suggestion we gave him physostigma in five-drop doses, which had the same effect as in the other cases I have reported. It is a little peculiar that the two drugs together should have a better effect than either taken separately.

Dr. W. C. Dugan: Dr. Scott brought out one important point, and that is the danger of a lull in the symptoms in cases of appendicitis. This is a point that has been emphasized by Abbey. That is, on the second or third day the symptoms improve, the patient suffers less pain, pulse becomes less frequent, and the high temperature may return to almost normal. For this reason the patient is thought to be improving and operation is delayed, while it ought to be looked on with suspicion as a symptom, and oftentimes an indication for immediate operation. At this period nature in its endeavor to protect the general peritoneal cavity has thrown a wall of lymph around the appendix. This lull in the symptoms is the key-note for the surgeon. If we allow this time to pass without an operation, we find that on the fourth or fifth day we have an aggravation of symptoms.

In regard to the rupture that Dr. Cartledge speaks of, I am rather inclined to think that the doctor is mistaken concerning the location of the rupture. I do not believe the rupture is at the base in these spontaneous cures; I think it is at the apex rather than at the base, and the appendix in most of these cases is found pointing in the pelvis. I have found it thus in a number of cases, and the appendix attached to the bladder or to the

rectum, and in these spontaneous cures I am quite sure that the rupture is at the apex or lower part of the appendix rather than at the base or cecal end.

Regarding paresis, I have seen, if I mistake not, three cases of appendicitis die about as Dr. Cartledge has described in septic paresis. In all of them I tried the use of strychnine hypodermatically with no beneficial result. In these cases the appendicitis was what is known as the gangrenous form. In two of them the appendix was simply necrosed (death *en masse* as it were), without an enterolith and without rupture. Why this condition should occur I am unable to say, but the whole thing was dead, and the cavity filled with a peculiar greenish-colored serum, but no pus I am positive. I believe these cases all die. I do not believe that an operation promises much; I do not believe the hypodermatic injection of strychnia, nux vomica, or any thing else would be of benefit; they simply go on and die from the absorption of septic matter that is in the cavity. I doubt whether nux vomica has any effect; in the three cases I have had recently I know that it had absolutely none.

Dr. Vance: Had the patients referred to received any opium before you saw them?

Dr. Dugan: One I saw in thirty-six hours after the initial attack, and operated within forty hours; no opium had been administered. Patient had paresis at the time of operation, and while the general conditions looked encouraging the tympany continued, and she died, as did the other two, with great distension, and at no time were we able to get either gas or feces.

Dr. Chenoweth: In regard to the causation of appendicitis, I believe it has been mentioned that injury plays an important part. I have seen several cases which could be directly traced to injury. I notice Dr. Dugan states that cases of gangrenous appendicitis without adhesions all die. I think it depends altogether upon the time at which you open the abdomen. I recently saw a case of appendicitis in the country; a man, who had been pitching hay, came in feeling a little soreness in the side. The next morning he got up, walked out in the yard, and his bowels moved; as he went back into the house he was seized with violent pain in the abdomen, and sent for his family physician. The doctor recognized that it was a case of appendicitis, and telephoned for me to

come out. I went about two o'clock in the afternoon, taking a nurse and every thing prepared to do a laparotomy. Found the patient with pulse 120, temperature 104° F., abdomen distended. This was five hours after he had been taken with the acute pain. He was placed upon the table and the abdomen opened; I found the appendix twisted on itself tightly at the base, green, gangrenous, and perforated. There were about two teaspoonfuls of fecal matter in the cavity, the perforation being just by the side of the colon. There were no adhesions formed. The abdomen was sponged out, the cavity packed with gauze and the patient put to bed. He made a perfect recovery, with little or no trouble after the operation. The operation was performed a little over five hours after he had the first acute symptoms. I believe the result depends very largely upon how many hours have elapsed between the appearance of acute symptoms and the operation. I think after six or seven hours have elapsed before operation they will nearly all die.

Dr. D. W. Yandell: In connection with the case of intestinal paresis reported by Dr. Cartledge—the intestinal condition that followed one of his cases—I notice a case reported by Keen, of Philadelphia, "Laparotomy for Apparent Intestinal Paralysis, which caused arrest of the intestinal contents, and was equivalent to intestinal obstruction." He reports a case of this sort, very much like the one reported to-night by Dr. Cartledge, and says that it was successful, that the woman got well. I will quote a portion of his closing remarks:

. . . There are several interesting features in this case which demand attention. First, the pathological condition. From the middle of the small bowel down to the ileo-cecal valve the lumen of the bowel was diminished to less than one half the caliber of the upper portion, whereas the large bowel was dilated very greatly with gas. Neither the constricted half of the small bowel nor the dilated large bowel contained any fecal matter, only a few drops exuding through the two incisions made in the large bowel, and so far as could be judged by stripping with the finger the contracted small bowel was equally empty. It did not, however, seem to be in a condition of spasm as far as could be judged; there was no rigidity or special hardness. There was no occlusion at the point of sudden narrowing, nor any other extensive constriction, but certain it was that for a week, and possibly longer, no peristaltic gurgling had been heard, nor, from the absence of any

fecal matter, had any peristalsis probably existed. My opinion prior to operation was that most likely, in spite of the patient's age, there was invagination at the ileo-cecal valve, or possibly appendicitis. Her mental condition was such, however, that all the subjective signs were doubtful, and even the objective signs, such as tenderness, etc., were very difficult to establish. I have never before seen apparent arrest by so sudden a contraction of the small bowel and the dilatation of the large bowel without assignable cause. . . .

Secondly, the laparotomy was entirely exploratory, and the case shows the wisdom of it. The laparotomy was done to make a diagnosis as well as to institute such treatment as the conditions found would warrant. The case shows also the wisdom of small incisions in the bowel, incisions which can be perfectly well made and closed by any of the ordinary intestinal sutures, rather than making punctures and leaving them to heal without sutures. . . .

Dr. Cartledge: There is one point that I overlooked in my remarks upon cases of this character. I never hesitate as a rule, if the patient has any pulse at all, to do an operation for intestinal obstruction, that is, a primary laparotomy; but most of the secondary laparotomies, that is, secondary re-opening after laparotomy has been done for intestinal obstruction, I believe so far have been without a single recovery. In the case I reported to-night, when I saw the patient on Sunday morning and re-opened the wound, my judgment was really against it, but as there was a possible chance of success I thought best to give the man the benefit of the doubt.

Dr. Rodman (Two Cases of Strangulated Hernia; Herniotomy): I have had quite a run of strangulated herniæ, having operated upon five or six cases within the last few weeks. The last two cases are the most interesting.

Case 1. Three weeks ago last Saturday I saw, with a practitioner, in the eastern portion of the city, a woman forty-seven years of age, the mother of thirteen children. She had been the subject for years of a left inguinal reducible hernia. On Friday the hernia descended and she was unable to return it. Her family physician was sent for, who, recognizing that it was probably a strangulated hernia, requested that I be called to see the case. I saw the patient at six o'clock Saturday evening, and, feeling sure that the trouble was strangulated hernia, advised early operation.

This was consented to, and in operating I found a rather peculiar and I take it unusual condition of affairs. The hernial sac was an incomplete one; I was very much puzzled when I cut down upon it, because I could find the sac posteriorly but not anteriorly. It is the only case of inguinal hernia that I have ever seen where there was an incomplete sac, and I would like to ask the Fellows if in their experience they have ever operated upon such a case. Of course we know that such cases occur where the viscera are incompletely invested by peritoneum, notably the lower portion of the large gut, bladder, and in ventral herniæ. The patient made a smooth and easy recovery, never having had a single bad symptom.

Case 2. Two weeks ago, with Dr. Proctor, I saw a man forty-five years of age, who had a very large right inguinal hernia, which had become strangulated, and all efforts to reduce it had failed. I found the man vomiting, suffering intense pain, and I advised immediate operation. After freeing the sac from all attachments, which were very dense, following it well up to the neck, and making sure that all the contents had been carefully reduced, I then pulled upon the sac, twisted it upon its axis after the method of Kocher, of Berne, and threw a ligature around the sac as high up as I could; then, after cutting the sac off with scissors, I saw at once that I had cut the appendix, but I had been perfectly satisfied at the time I threw the ligature around the sac that it was completely emptied of its contents. I aimed to grasp the appendix before it had gotten out of my reach and passed up into the cavity, but failed to do so. It then became necessary to make quite an extensive incision to find the appendix which had been cut. I pulled the appendix down with the cecum again, and then saw why I cut the appendix. It had become adherent to the upper part of the neck of the sac, and it would have been impossible to have cut the sac as high up as it should have been cut without doing injury to the appendix. The man made an excellent recovery, never having had a bad symptom since the operation.

DISCUSSION.

Dr. Dugan: The case reported by Dr. Rodman illustrates the danger of that method of operating. I do not believe we should ever ligate the sac until it is dissected up, opened, and the finger introduced down to the neck, and the ligature applied after the

fashion of McBurney. Dr. Rodman was certainly very fortunate in finding the appendix and promptly correcting the condition, for otherwise the patient would have bled to death, or else died of general peritoneal infection. A ligature applied to the neck of the sac including the appendix, and with not sufficient force to hold it *in situ*, would not have been sufficiently tight to control hemorrhage, and therefore the patient would have been subjected to great danger.

Dr. Rodman: Bull reports in the Annals of Surgery almost a similar case. In tying the ligature he found from the resistance that he had included a portion of the intestine in the sac; he released the ligature at once, and, as it was a part of the small intestine that had been included, he thought the temporary strangulation was not sufficient to cause necrotic changes in the gut; but such change did occur and death resulted afterward. I take it that these accidents are not so very uncommon.

LOUISVILLE CLINICAL SOCIETY.*

Stated Meeting, December 5, 1893.

Dr. W. O. Roberts (Malignant Disease of the Rectum; Operation): At the last meeting of this Society I reported a case of malignant disease of the rectum, and brought the patient with view of having Dr. Mathews especially examine him, but as he was not present I did not exhibit the patient. He was a Polish Jew, about forty-five years of age, who had been complaining of rectal disease for quite a long time, and when I examined him I found on the posterior surface of the lower end of the rectum an indurated ulcerated surface about the size of a silver dime, and on either side of it was a hard nodule about as large as the end of your little finger.

I resected about one and a half inches of the lower end of the rectum. There is no doubt in my mind about the trouble being malignant in character, but no microscopical examination has been as yet made of the specimen removed. The operation consisted in first splitting through the back part of the sphincter

*Stenographically reported for MATHEWS' MEDICAL QUARTERLY by C. C. Mapes.

muscle and then dissecting the gut, pulling it down and stitching it to skin at the verge of the anus (Whitehead's operation). The nodule was located in the submucous tissues and was quite hard.

DISCUSSION.

Dr. J. M. Mathews: The reason I suggested that Dr. Roberts report the manner of resecting the growth was that I am indebted in an especial way for the technique of Kraske's operation to Dr. H. O. Walker, of Detroit. At the meeting of the Mississippi Valley Medical Association at Indianapolis, a few months ago, Dr. Walker reported two cases of Kraske's operation for the removal of malignant growths of the rectum, and suggested the use of Murphy's button, procuring of course a very large size for the purpose, and stitching the gut above and below. He exhibited the button, but remarked that he himself had not yet used it.

In the last issue of the Journal of the American Medical Association Dr. H. O. Marcy, of Boston, reports a case where he acted upon Dr. Walker's suggestion with a perfect result. I was impressed at the time of Dr. Walker's report that it was a most admirable suggestion, and asked him to try it on his next case and report it, that he might be on record as making this valuable suggestion in resecting the rectum. Although the credit is due Dr. Walker, his case was only incidentally referred to by Dr. Marcy in his paper.

In the case reported by Dr. Roberts, I believe that he pursued the only course, if he was satisfied that the nodule was malignant that he was dealing with. Inasmuch as the growth did not involve a larger space than he states, I believe the operation he did was quite sufficient. But it is suggested and practiced by those doing surgery upon the rectum, that when the growth is at all extensive, or where there is disease taking in the entire circumference of the gut, or even anteriorly and posteriorly, or anteriorly and one side, that complete excision should be made. Now we are all very well aware of the fact that it is a difficult thing to do an excision and include a malignant growth in the manner Dr. Roberts suggests. I have done the same operation that Dr. Roberts did in this case, and with considerable success. I say success, in that the man was able to control the

passage of feces after I resected the lower end of the gut, which included the sphincter muscles.

There is one point in Dr. Roberts' report that I have had occasion to mention before. I know many authorities say that it is the proper thing after a division of the rectum to bring it down and attach it to the true skin. I have attempted to do this, and in several instances thought I had succeeded, but in each case the stitches separated and I had trouble later from the granulating surfaces, and there was free discharge of pus. I suggested, a number of years ago, that where a resection, say of one and a half inches, of the lower rectum is made, that it is best to leave the gut without stitching and allow cicatrization to take place, the surface healing by granulation, inasmuch as the cicatrization itself would act as a wonderful aid in controlling the feces, especially if the sphincter muscle is removed in doing the operation.

Latterly I see most all the men who do work in this line believe in Kraske's operation for the cure of malignant growths of the rectum, especially if located at any height, and there is no doubt that by removal of a portion of the sacrum and getting in from behind we have an opportunity to handle the rectum in a manner that we can not possibly do unless we do this operation suggested by Kraske, which is coming into vogue and is being used by the majority of men who are operating upon the rectum. Of course Kraske's operation is thoroughly understood, and it is not necessary to describe it. One great thing in its favor is that the sphincter muscles are saved.

Dr. Roberts: In the operation of Kraske the disease, as Dr. Mathews says, is situated high up in the rectum, and usually there is a point below that is considered in a healthy condition. I would like to ask Dr. Mathews whether he has done or seen done the operation of Levy. That is, the one in which a flap is made of the soft tissues and bone above, making a transverse incision through the lower part of the sacrum, then two vertical ones, turning it down—a trap-door flap as it were—resecting the rectum and then replacing the flap. Levy reports a number of cases in which he has done this operation with good results, and it seems very plausible.

Dr. Mathews: I am familiar with the operation of Levy, but I have never seen it done.

Stated Meeting, December 19, 1893, Dr. P. F. Barbour, Vice-President, in the chair.

Dr. L. S. McMurtry (Operation for Appendicitis): I have a specimen here from a case illustrating some important points connected with the surgery of the vermiform appendix. The patient, a man aged about thirty-three years, gave a history of illness extending over a period of ten days. He came from Somerset, Kentucky, on Sunday. An examination revealed a tumor in the right iliac fossa; temperature 103.5° F. in the evening, 100° F. in the morning, rapid pulse, indications of suppuration. I operated yesterday morning, and after cutting down on the tumor found extensive adhesions; these being separated, over a pint of very foul pus was evacuated. Upon reaching the cecum I found the appendix and abscess posterior to the cecum, and in order to deal with it I had to separate adhesions and open the general peritoneum. This was done, and the appendix removed. I irrigated the sac that had been shut off from the general peritoneal cavity, then irrigated the general peritoneum, using, I think, fully three gallons of water. I passed a glass drainage-tube down into the recto-vesical space, and a rubber drain, also iodoform gauze, down to where the abscess was situated. The patient went on the table with temperature as stated, pulse 118, and in six hours after the operation the temperature was normal, pulse 88. His pulse this evening is 74, and his condition thoroughly satisfactory.

I report the case to bring before the Society especially the method of operative procedure. As is well known, it is a mooted point as to whether, in dealing with these cases, the surgeon should stop with opening up the abscess cavity and evacuating it. This case would have demonstrated to any one who would follow the operation that, if we had contented ourselves with simply opening and evacuating the original abscess sac, we would have left two bags of pus down underneath the colon which would have prevented recovery of the patient. After emptying one sac and separating adhesions two others were opened. I believe we should never content ourselves in dealing with these cases, if the patient's condition will permit, by simply ligating and removing the appendix; but should also make a thorough examination of the colon, and underneath and around it, in order to determine

definitely if other pus sacs exist; and, if found, they should be evacuated and the appendix removed, just as we would a sequestrated bone with a sinus leading down to it. The appendix in this case was underneath the colon, up and behind it.

DISCUSSION.

Dr. A. M. Vance: Had the patient received any previous treatment? Had any opium been administered?

Dr. McMurtry: No opium had been given previous to the operation, and none has been required since.

Dr. Vance: I do not think there is any question before the present surgical generation as important as this. It would seem for some reason that there is much more appendicitis than ever before, or we are beginning to recognize it more promptly, and I am glad that Dr. McMurtry has brought up the question as to how far we should go in our operations. I thoroughly agree with him that we ought to seek the appendix and remove it, if found in the condition he has shown in the case reported, or if it is shown to be the source of the trouble. It is a fact, however, that the necessity for opening up the general peritoneal cavity, thereby jeopardizing the patient as to life, in addition to opening the primary abscess, becomes a very serious matter, and one which demands the most careful consideration. On the other hand, the danger is very much lessened by completing the operation at the first seance, rather than be compelled to do a second operation later. The chances are, in the case reported by Dr. McMurtry, if he had not completed the operation, had not gone into the peritoneal cavity and removed the two pus sacs described, the result would have been fatal. It is sometimes impossible to get at the appendix without opening the peritoneal cavity. Another point in favor of the case reported is the fact that the patient had received no opium previous to the operation. I think this is one of the greatest dangers in the course of cases of this character. The bowel paresis is often not due to sepsis, but to opium. Another feature of importance I mentioned, at a recent meeting of the Surgical Society, is the treatment of wounds after operations for appendicitis. I have had one case of hernia occur, and have been impressed with the great liability to hernia in these wounds, as they are of necessity usually made outside of the

median line. I saw in a medical journal this week where one instrument-maker in New York had sold, I think, eight dozen special trusses in the last year for the treatment of herniæ, the result of these operations, and I think that possibly we do not keep these patients under observation sufficiently long and keep on a constricting band until the wound becomes hardened and firm. I think it behooves us to keep on a good belt or some other contrivance that will prevent strain upon the cicatrix.

Dr. Roberts: I agree perfectly with what has already been said about going into the peritoneal cavity in operating for appendicitis. I think, after we open the abscess cavity and wash it out thoroughly and search for the appendix and fail to find it, or where there are other conditions making it necessary, we should open the peritoneal cavity.

As to the question of hernia following appendicular operations, they are, of course, very much more apt to occur after lateral laparotomy than after median, and this is one of the cases in which I believe a multiple line of sutures to be advisable. We should stitch the muscular layer with buried sutures. By this method I think we will be less apt to have hernia as a result than if we use the single suture as we do in ordinary laparotomy.

Dr. W. H. Wathen: It is certainly the best treatment to remove the appendix, if it can be done without subjecting the patient to very great additional danger. Where the peritoneal cavity has been opened and pus has soiled the peritoneum, it is better to go on separating adhesions and, if possible, get away the appendix. But if the pus cavity has been opened and the pus gotten away without opening or exposing the peritoneum, if we can not then find the appendix it would be bad surgery to attempt to remove it.

Dr. McMurtry: I want to confirm the points that have been mentioned in regard to the operative procedure by referring to a case in which I was associated with Drs. Vance and Griffiths, and in which we did not do as in the case reported. The patient's condition did not justify any more manipulative work in the abdominal cavity than was absolutely necessary, and we did not open the peritoneal cavity. We simply opened, evacuated, and irrigated, as we thought, the entire abscess. The patient's condition seemed to be very promising for several days, when septic

symptoms developed, and we agreed to re-open the abdomen. This was done, and we evacuated another abscess, feeling sure that we had evacuated every thing, draining thoroughly, but did not see the appendix. The patient did well for a few days, when she again had septic symptoms and an additional abscess opened into and discharged through the vagina after two weeks' illness. She became practically well, was up and about, but subsequently suffered with recurring attacks of appendicitis. Less than a year afterward we re-opened the abdomen and removed the appendix, and the patient became entirely well. There is no doubt in my mind that all the subsequent trouble could have been prevented if the patient's condition had permitted and we had opened the peritoneal cavity and removed the appendix at the first operation.

Dr. J. A. Ouchterlony (Three Large Gall-Stones, with Report of the Cases): I wish to exhibit to the Society a number of gall-stones, single, and of somewhat unusual size. There is no clinical history attached to any one of them, but I have brought them here for the purpose of illustrating some points in connection with the subject, which is quite an interesting one. Of course I do not propose to address a learned society like this upon the symptoms of gall-stone colic, but it happens now and then that gall-stones become impacted and that a number of complications arise which ordinarily are considered to be of quite rare occurrence. I am satisfied that they occur more frequently than is generally supposed. It is not very uncommon to find that patients suffer from repeated attacks of hepatic colic, with or without jaundice, and that a most careful search fails to develop the presence of a gall-stone in the fecal evacuations. Now this must be due to one of several conditions: either the gall-stone is so large that, like the one I present here (obtained from the gall-bladder of a subject in the dissecting-room at the University), it can not possibly pass out; or a gall-stone, though quite large, may enter the orifice of the cystic duct, giving rise to symptoms of gall-stone colic, but it soon tumbles back. Here are two specimens which illustrate that condition, one of which I owe to the kindness of my friend, Dr. Satterwhite. Gall-stone colic occurred over and over again, but no gall-stone ever passed. The third condition is where the gall-stone enters the duct and passes into

the ductus communis choledochus and becomes impacted there. The last condition is where the concretion passes through, or a number may pass through, and become lodged in the cecum. In the latter case it happens often enough that, after a large quantity of fluid, purgatives, or a large dose of sweet oil have been given, a great number of gall-stones are found in the evacuations. It has been supposed that the sweet oil has caused the expulsion of the gall-stones from the gall-bladder. This is manifestly impossible; I do not see how sweet oil can have any other effect than that of simply loosening up the mass that has formed in the bowel and thus promoting thin fluid evacuations.

My observation has been this: That when there are a number of attacks without any jaundice, and without the finding of any gall-stones in the evacuations, the gall-stone has tumbled back into the gall-bladder, as it did in the case which I have just spoken of. When a gall-stone becomes impacted in the ductus communis choledochus there is more or less impediment to the passage of bile, and, besides our not finding any gall-stones in the evacuations, while there is recurrence of the fits of colic there is also jaundice and often more or less enlargement of the gall-bladder. The evacuations, however, are not always entirely devoid of bile; the obstruction of the bile being only partial the bile would trickle down past the impacted stone. When the latter occurs of course there is danger of ulceration and perforation of the duct and general peritonitis. When the gall-stone is so large that it can not enter to any extent in the cystic duct, of course, while we have a great deal of pain we are likely to have two conditions, one absence of jaundice, the other cholecystitis. This cholecystitis I have seen in a number of cases result in entire occlusion of the orifice of the gall-bladder, and under such circumstances the gall-bladder does not become reduced in size, but on the contrary is liable to increase and become quite large. The latter change is due of course to exudation from the vessels and to accumulation of pus, which is abundant in proportion to the duration and the severity of the inflammation. The subject is an exceedingly interesting one, and one of the points suggested by the specimens is the indefinite variety of formation and appearance of the stones. Here are three; they are entirely dissimilar. I remember another stone that the late Dr. Leake, of

Texas, obtained from a subject while in the Louisville City Hospital which was perfectly pyriform. It was as perfect a cast of the interior of a gall-bladder as it is possible to conceive.

DISCUSSION.

Dr. Roberts: I quite agree with Dr. Ouchterlony that gall-stones frequently occur when not suspected. I remember, when demonstrator of anatomy in the University, it was not unusual to find several cases of gall-stones every year as large as the smaller one exhibited by Dr. Ouchterlony, and in which the cystic duct would be entirely closed and there had been no jaundice in the subject. I made a *post-mortem* not long ago in a case that was seen during life by Dr. McMurtry, in which the woman had had a tumor in the right hypochondriac and lumbar regions. It was a movable tumor, and resembled very much an enlarged kidney. The tumor when I saw it was quite movable, there was never any jaundice, and the patient at the time I saw her did not complain of much pain, just a sense of discomfort from the mere presence of the tumor. I saw nothing more of the patient after the first examination until something over two years had elapsed, when I was called by the family physician to witness a *post-mortem*, the woman having died of acute dysentery. We found the gall-bladder distended with mucus, but apparently no bile, and in the gall-bladder were seven gall-stones larger than the larger of the two smaller ones that Dr. Ouchterlony has exhibited, and the cystic duct entirely closed.

Dr. T. P. Satterwhite: I want to corroborate what Dr. Roberts has said. While I was demonstrator in the college eight years it was not infrequent to find gall-stones in the dissecting-room. Of course, whether the subjects ever complained during life I do not know, but it was quite frequent that gall-stones were found.

Dr. P. Guntermann: The smaller stone exhibited by Dr. Ouchterlony was taken from a subject who had been for several years my patient for other troubles as well as biliary colic or gall-stone colic. She passed through several attacks of short duration, and every time apparently perfectly recovered. She never had any jaundice until the last attack. She was then on a visit to her father; she was attacked suddenly and very severely, and went to the office of a neighboring physician. He examined her

superficially at the office and prescribed for her; in the evening he was called to see her. He then made a very close examination and diagnosed appendicitis. The next morning there was no cessation of pain, patient still continually vomiting, and I was called in also. On examination of the patient I found a tumor which was loose and floating in the right hypochondriac region. I did not deny the diagnosis of the physician who was in charge nor did I make one myself, but I expressed my doubts as to its being a case of appendicitis, and advised that Dr. Satterwhite be called in to make out the diagnosis and operate at once if necessary. Dr. Satterwhite came twenty-four hours afterward, and at that time there was a distinct large tumor, not fluctuating, in the right iliac region, extending from the lower ribs down. Diagnosis was then made of appendicitis. There was no fluctuation or any thing at all indicating pus or fluid. It was decided to operate the next morning—the people could not decide whether it should or should not be done—so operative interference was postponed until the next morning. At eleven o'clock an incision was made, and the cecum and appendix were found to be perfectly healthy, and out of the wound protruded a large, pear-shaped, angry, maroon-looking tumor. The incision was enlarged and tumor found to be the gall-bladder, which was opened, discharging some very ugly looking pus, and this little mulberry stone was found in the mouth of the duct, firmly impacted. That case proves, as Dr. Ouchterlony has said, in the first place that gall-stones may lie in the gall-bladder for a long time and give rise to no particular trouble, then may pass into the duct and produce cholecystitis of a very severe character, and prove the cause of death. In this case the walls of the gall-bladder were about three eighths of an inch in thickness; the bladder itself was about five inches long and perhaps two inches in diameter.

Dr. Vance: I would like to make record of a case very much like the one Drs. Satterwhite and Guntermann have reported. A woman, fifty-two years of age, was seen first by Dr. Dugan, who made diagnosis of appendicitis. I saw her subsequently, and also made a diagnosis of appendicitis. The history was that the woman had been sick for two days, and for a number of years had had discomfort, but nothing of any great moment, in the region of the liver. I took her to the Norton Infirmary and

operated for supposed appendicitis, and came down upon a pyriform, maroon-colored tumor, such as Dr. Guntermann speaks of. It reached down in the pelvis, and the ordinary incision for appendicitis probably came down upon it at about one third the length from its lower extremity. I at once recognized it to be the gall-bladder and opened it, removing six stones about the size of a hazel nut. Five of them were in the gall-bladder proper and were highly polished; the sixth one was taken from the cystic duct and was not polished, having no facets. The woman made a good recovery, and has been perfectly well since. I simply report the case to show how the gall-bladder may reach into regions far remote from its normal site.

Dr. Haynes reports a case of *intestino-peritoneal septicemia* in a woman, aged twenty-six years, who was delivered of a good-sized boy after a labor of about ten hours. The case progressed normally, without a single bad symptom, for seven days, when she had a severe chill, temperature 104° F., pulse 150, respiration 24; very restless, face flushed, skin hot and dry. Carbolic douches had been given morning and evening from the first. The lochia had been natural and without odor for the entire time. Bowels had not moved for two days. On the eighth day curettement under chloroform was performed, but no trouble found. Intra-uterine douche of carbolic solution given and salines kept up. On the ninth day patient was feeling well but weak, and recovery was uninterrupted.

The author concludes as follows: "Here is a clear case of self-infection from intestinal bacteria allowed to develop during two days of constipation, and probably penetrating to the peritoneal cavity, relieved by free saline cathartics. I do not think any thing else had any bearing upon the treatment, except possibly the carbolic douches might help restrain bacterial action; but just as soon as the bowels began to act freely, and afford free drainage from the abdominal cavity, the symptoms began to mend."—*New York Medical Journal.*

MATHEWS' MEDICAL QUARTERLY

"ALIS VOLAT PROPRIIS."

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JOSEPH M. MATHEWS, M. D., - - - - - - - Editor and Proprietor.
HENRY E. TULEY, M. D., - - - - - - - Associate Editor and Manager.

A Journal devoted to Diseases of the Rectum, Gastro-Intestinal Disease, and Rectal and Gastro-Intestinal Surgery.

Articles and letters for publication, books and articles for review, communications to the editors, and advertisements and subscriptions should be addressed to
Editors Mathews' Medical Quarterly, Box 434, Louisville, Ky.

Greeting.

Seventeen years ago the editor first embarked in the specialty of diseases of the rectum. Up to that time no one in the regular profession had engaged in this *special* practice. For twelve years the subject has been taught by him in connection with the chair of Principles and Practice of Surgery. During these years it has been a pleasure to note that many distinguished surgeons, both in this country and Europe, have devoted themselves to the exclusive practice of rectal diseases. The treatment of these diseases, which in times past was given over to the charlatan, has at last been rescued from them, and to-day constitutes a legitimate specialty within the ranks of the regular profession. It is pleasing also to record that in these few years many new operations have been devised and practiced successfully upon the rectum and colon, evidencing that this special line of surgery has kept pace with the other specialties. Among these may be mentioned the removal of the sigmoid flexure for malignant disease, Whitehead's operation for hemorrhoids, Kraske's operation for the removal of the rectum, anastomosing the flexure to the rectum (Bacon), a new operation for fistula, etc.

Being so long identified with the practice of these diseases, the editor feels that he would serve the interest of the profession in

presenting them a special organ through which all subjects pertaining to the specialty could be discussed. It is the purpose of the journal to collect all valuable articles or suggestions relating to this special class of diseases, so that at the end of each year the reader will have obtained all that is new in this special line, and have in such a cyclopedia of useful knowledge. The subjects of gastro-intestinal disease and surgery have been included on the title-page, because they are intimately associated with diseases of the rectum, and are to-day receiving the most profound attention from the surgeon as well as the physician. In this issue the subject of appendicitis is ably discussed by several of the most distinguished surgeons of the country, and that too from different standpoints. Having but recently determined to publish this journal, the editor had but little time to call on the profession for contributions for the first issue. How well he succeeded can be judged by looking over the list of contributors. To each one of them the editor desires to return his sincere thanks; and to the reader an assurance is given that each succeeding number will be a prototype of the first in valuable and interesting articles pertaining to the subjects within the purview of the journal. The editor is profoundly grateful to the many distinguished physicians who have written so kindly of the "new venture;" and to the Medical Journals that have sent us words of greeting we would say, on this, the first day of January, 1894, "May you live long and prosper."

APPENDICITIS.

Anent the subject of appendicitis as it is viewed at the present day, it is of interest to review the subject from the time of its first recognition as a pathological entity. A review of the literature of the subject shows, as far as we are able to ascertain, that T. G. Morton claims to have diagnosticated the first case in April, 1887, and operated (based upon that diagnosis) successfully for perityphlitic abscess.

Hall, of New York, in 1886, after evacuating an abscess removed an ulcerated appendix, and the patient recovered; but diagnosis was not made before operation. According to Morton, Mr. Hancock, of London, appears to have been the first to urge operative interference in perityphlitic abscess by free incision and drainage, but this did not meet with much favor until it received the endorsement of Willard Parker in 1867.

In 1878 Sands, of New York, was able to report twenty cases treated in this way, and in 1883 Wm. Pepper, at a meeting of the Pennsylvania Medical Society, presented statistics of one hundred cases contributed by Noyes, of Rhode Island. From these and numerous other contributions to the literature of the subject it was finally determined that surgical interference in cases of so-called perityphlitic abscess largely reduced the mortality of the affection. This was a decided step in advance upon the old method of non-interference.

Gerster gives to McBurney the credit of being the principal exponent of timely operation. McBurney claimed that few, if any, inflammations in the right iliac region had their origin other than in the vermiform appendix, hazarding the proportion of one to one hundred. In an exhaustive paper on the subject he laid great stress upon the special symptoms, particularly describing the exact locality of greatest sensitiveness, which point still bears his name.

THE MODIFIED KRASKE OPERATION.

One of the most important operations done upon the rectum to-day is *Kraske's operation* for the relief of malignant disease. The most difficult step in the operation is the end-to-end approximation of the divided gut. At the last meeting of the Mississippi Valley Medical Association, held at Indianapolis, October 5, 1893, Dr. H. O. Walker, of Detroit, suggested a modified Kraske operation, which consisted of the use of an enlarged Murphy button to effect the end-to-end approximation of the gut. Subsequent to this meeting, Dr. Henry O. Marcy, of Boston, acted upon Dr. Walker's suggestion and did a Kraske operation by the aid of the Murphy button. Thus it will be seen that

the original suggestion was made by Dr. Walker, and the first operation of the kind done by Dr. Marcy. Both gentlemen have been kind enough to contribute their views on the subject for this issue of the QUARTERLY. All honor to both of these distinguished surgeons for devising and carrying out so important a procedure.

MR. WILLIAM ALLINGHAM.

We are very glad to be able to present to our readers the picture of Mr. William Allingham, of London, Eng., being the only one, to our knowledge, that has ever appeared in print in the United States. His long service at St. Mark's Hospital and his most excellent work on diseases of the rectum have made his name familiar to every American doctor. His book is one of the most practical that has ever been written on this special class of diseases, and his numerous articles that have appeared from time to time in the American and European journals have stamped him as one of the ablest and most conscientious of surgeons.

Although he has given much of his valuable time to the consideration and treatment of rectal diseases, he stands eminently high as a general surgeon. Many of the capital operations have been improved by his methods. Being possessed of untiring energy, he has accomplished more that is of real worth than many men who rank high in the medical world and are much older.

To the American surgeon who visited St. Mark's he was always urbane, generous, and exceedingly kind, and it is much to be regretted that he has retired from active service at that institution. Although below the medium in stature, he is big-brained and of a jovial disposition, and the stranger in his presence is at once put at ease.

The editor will always feel himself the debtor to this distinguished surgeon for the many courtesies shown him while visiting England, and it is with much regret that we now chronicle the fact that his son informs us that the father is passing through an attack of pneumonia.

We voice the good wishes of the medical profession in America in saying that we hope that before this Mr. Allingham is restored to health, and that he will live many years in which to administer to the afflicted.

TOO LATE.

Several articles of great interest were received too late to appear in this issue, but will in the next.

In this connection we desire to say that four of the most prominent surgeons in Europe have promised contributions for the April number. It is to be regretted that the contributions of Dr. John P. Bryson and Dr. A. C. Bernays, upon rectal subjects, were received too late to be placed in the proper department, but they are correctly placed in the index.

Correspondence.

EDITORS MATHEWS' MEDICAL QUARTERLY:

In regard to the position of the incision in cases of appendiceal abscess, it is my opinion that it is not only justifiable but advisable to first make a small median incision in order to estimate exactly the extent of the attachments, the site of the abscess, the presence or absence of secondary purulent foci, and the real condition of the whole peritoneal cavity. After being satisfied on these points, the median wound can be closed, and with the information thus obtained the surgeon can with certainty cut down over the pus cavity without fear of causing a general peritoneal infection. Should secondary collections of pus be found distributed throughout the peritoneal cavity, they can be much more readily got at, and more thorough cleansing of the peritoneal cavity can be made through the median than through the lateral incision.

The ordinary median incision is almost without danger, and as life depends on this matter of general peritoneal infection, I would advise this as a preliminary to the lateral incision.

PAUL OUTERBRIDGE, M. D., *New York.*

Necrology.

DR. WILLIAM MANDEVILLE GRIFFITHS.

It is with deep regret that we chronicle the death of William Mandeville Griffiths, M. D., which occurred at his residence in this city the evening of December 24, 1893. He had been in ill health for ten days previous to his demise with what he supposed to be "La Grippe," but his condition was not considered serious, and his sudden and untimely death was a great shock to his family and his many friends, and carried sorrow to a large circle of his professional associates in this city and elsewhere. He was the only child of Dr. Thomas J. Griffiths, who was an eminent physician and was for many years Surgeon of the United States Marine Hospital prior to his death, eight or ten years ago. The first Surgeon of this Hospital was Dr. David J. Griffiths, an uncle of the deceased. Dr. George W. Griffiths, of Louisville, who for a number of years has been chief surgeon of the Louisville & Nashville Railroad, was also an uncle. His grandfather, great-grandfather, and great-great-grandfather were all ministers in the Presbyterian Church.

Dr. William M. Griffiths was born in Louisville, February 16, 1855. In his early youth he attended the Louisville Male High School. He studied medicine in the office of his father, and was graduated from the Medical Department of University of Louisville in 1876. He began practice in his father's office, and was soon afterward appointed Assistant Surgeon to the U. S. Marine Hospital, a position which he held continuously to the time of his death. He declined the offer of Chief Surgeon in the Marine Hospital Service, because that officer is transferred every three years, and he desired to remain in Louisville.

Dr. Griffiths was a young man of remarkable brilliancy in his profession, and was possessed of wide knowledge, which embraced the sciences and literature. Those who have had the pleasure of intercourse with him know how delightful, cheerful, and bright a companion he was, and appreciate the brightness of his ready wit. His wife and a daughter five years of age survive him.

As an evidence of the high esteem in which Dr. Griffiths was held, a meeting of the physicians of the city was held December 26, 1893, in the rooms of the School Board to do respect to his memory.

On motion, Dr. T. P. Satterwhite was called to the chair and Dr. Ewing Marshall was made secretary.

The meeting was attended by a large number of the profession, and was addressed by several members, paying tribute to the high professional character and attainments of the deceased. On motion, a committee was appointed to prepare suitable resolutions expressing the high esteem in which the deceased was held by his professional colleagues, and the sorrow universally felt at his untimely death. The meeting then adjourned. The following are the resolutions:

Resolved, That the sudden death of our esteemed colleague, Dr. William M. Griffiths, in the vigor of early manhood, has deprived the profession of this city of one of its most capable, honorable, and useful members.

Resolved, That it is appropriate to publicly acknowledge our appreciation of his worth, his manly character, and his genial fellowship.

Resolved, That we express our sincere regret and heartfelt sorrow at his death.

Resolved, That we tender to his sorrowing family an expression of our profound sympathy in this hour of deep affliction.

Resolved, That a copy of these resolutions be sent to the bereaved family, and published in the medical journals and the local daily press.

P. G. Trunnell, M. D.,
L. S. McMurtry, M. D.,
A. Morgan Vance, M. D.,
Committee.

What Our Friends Say.

THANK you very much for the great compliment you have paid to my father and myself in asking us to assist by writing for your journal. I am simply almost at my wits' end to know how to get the work done, so must with much regret ask you to excuse me from writing an article just at present. At some future date I shall be most delighted to do so. I am sending you one of my father's photographs, as you express a kind wish to use it for your journal. My father unites with me in kindest regards and best wishes for your journal.

HERBERT W. ALLINGHAM,
25 Grosvenor Street, London, Eng.

I CONGRATULATE you on your undertaking to produce a journal on rectal diseases, etc., for which I think there is abundant room. I hope in a few days to be able to send you a short paper on "The Anal Valves; their Origin and Pathogenic Significance." Wishing you every success, etc.,

C. B. BALL, 24 Merrion Square, Dublin.

I SHALL be pleased to comply with your request, and wish the new publication all success. It will certainly fill a gap. As I am rather busy you will not anticipate a long paper now, but I hope to send you a long one for the next or a subsequent issue.

H. A. REEVES, London.

I AM sorry I can not promise to give you a paper now, having just had influenza, which knocked me out and got me behind in my work, but hope to do so on some future occasion. Believe me, with all good wishes,

ALFRED COOPER, London, Eng.

I AM delighted to learn from you of the prospective issue of a journal such as you mention. I sincerely hope it will attain to the high rank and usefulness of the other specialist journals, and am convinced it will in your hands be a pronounced success. If you will look over the field I believe you will agree with me in the opinion that the very best and most scientific journals published to-day are those devoted to special fields, as, for instance, those on bacteriology, ophthalmology, etc. Where do you see such careful, satisfactory, and practical work done as in this class of medical journals? I wish you and your enterprise every possible success.

JOHN P. BRYSON, M. D., St. Louis, Mo.

YOUR JOURNAL will become a standard for reference under your management. The need for special journals is one of the new and great needs of the times, and within the next decade we shall see this feature of medical journals more fully developed than at present. Nothing could give better evidence than the popularity of the German "Centralblätter."

ROBERT T. MORRIS, M. D., New York.

I HAVE your letter in which you kindly offer me the opportunity to write an article for your new journal for January. I should like very much to do so, but I have my hands very full just now. . . . I must ask you to give me another opportunity, if you will, at a later period.

CHARLES McBURNEY, M. D., New York.

YOU have a new field in medical journalism, and you should have as many permanent subscribers as an ophthalmological or otological journal. I wish you all manner of success.

A. C. BERNAYS, M. D., St. Louis, Mo.

I AM glad you have decided to edit a journal on your special line of surgery . . . and predict for it a marvelous success.

CHARLES C. ALLISON, Omaha, Neb.

I AM very sure the journal will be a success because it is needed. It is something I have often thought of. It is needed to gather the literature on these subjects together, and to counteract the painful influence of the irregular periodicals published.

GEORGE J. COOK, M. D., Indianapolis.

I AM glad to see that you are going to establish a quarterly journal devoted to your specialty, and will take pleasure in sending you a contribution. . . . I wish you would consider me a subscriber, with all good wishes for your new enterprise.

HUNTER McGUIRE, M. D., Richmond, Va.

PERMIT me to congratulate you and rejoice with the profession at large upon the work you are about to undertake. The position you have won for yourself as a specialist of highest rank assures the character and success of your publication.

RICHARD DOUGLAS, M. D., Nashville, Tenn.

I AM glad to hear that you have decided to edit a journal of the character mentioned in your letter of November 22d. I am glad the journal is to be published, I am glad you are to edit it, and I shall be glad to render any aid in my power.

DANIEL MORTON, M. D., St. Joseph, Mo.

I AM glad indeed that we are to have a journal devoted to diseases of the rectum, etc. You have again made another pioneer step which I hope and believe will be as brilliant a success as the first.

LEON STRAUS, M. D., St. Louis, Mo.

I SHALL be much interested in your publication, and shall endeavor some time in the future, if you should desire it, to prepare you a paper on some subject within the scope of your journal. I wish you abundant success.

L. H. DUNNING, M. D., Indianapolis.

ALTHOUGH burdened with many labors, I can not resist your request for an article, and you may put me down for a paper. I wish you great success for your new venture.

JOHN B. HAMILTON, M. D., Chicago.

I WISH you every success in your journal, and I believe the physicians will be greatly benefited by the reading of good literature in the field you propose to discuss.

THOMAS E. HOLLAND, M. D., Hot Springs, Ark.

YOUR new journal is a necessity and will be a success, and I am glad you are the pioneer in the literature as well as in practice of rectal diseases in this country.

JOSEPH B. BACON, M. D., Chicago.

I CONGRATULATE you on your new venture in journalism, and thank you for your courtesy in inviting me to contribute. I will send the paper this week, and I wish the QUARTERLY great success.

FRANK WOODBURY, M. D., Philadelphia.

I AM delighted to hear from you, and hope your new venture will prove a great success, and appreciate the distinctive honor of your request to contribute.

E. F. BRUSH, M. D., Mt. Vernon, N. Y.

I THINK you are about to undertake a good work. Allow me to thank you for your kind request.

F. BYRON ROBINSON, M. D., Chicago.

IT will give me great pleasure to contribute an article for the first number of your new journal, and I await with pleasure its appearance.

HENRY O. MARCY, M. D., Boston.

I AM heartily in accord with your new venture, and will do what I can for you from time to time.

H. O. WALKER, M. D., Detroit, Mich.

I SHOULD be very glad to appear in the new journal, and wish it a very successful career.

CHARLES B. KELSEY, M. D., New York.

I HOPE that your publication may prove even more successful than you anticipate.

EMORY LANPHEAR, M. D., Kansas City, Mo.

I WILL try mighty hard to get up an article for your first issue.

J. A. WYETH, M. D., New York.

I WISH you every success in your great undertaking.

WILLIAM PERRY WATSON, M. D., Jersey City, N. J.

I WISH you much success in your new enterprise.

JAMES P. TUTTLE, M. D., New York.

I WISH your new enterprise much success.

W. T. BULL, M. D., New York.

I WISH the journal unlimited success.

A. ERNEST GALLANT, M. D., New York, N. Y.

I WISH your enterprise abundant success.

N. SENN, Chicago.

A Word to the Busy Doctor.

THERE are very few people that reach the age of maturity who have not been troubled to a degree at least, or suspected that they had the hemorrhoidal disease.

It is their custom to consult the family physician for relief. The common custom is to prescribe an ointment, without first having made an examination of the parts. This is a mistake, for nearly every affection of the anus or rectum is called piles by the layman. Be sure to examine your patients that complain of rectal trouble. In lieu of a pile you may find a polyp, pruritus, condylomata, eczema, fistula, or cancer. If you make a mistake the patient may drift to another physician, who will criticise you for making a wrong diagnosis.

IF upon examination you find the patient really has piles, be sure to designate, in your mind at least, what kind of piles they are, whether external or internal, bleeding or not bleeding, protruding or not protruding. An intelligent prescription can not be made without settling these points. The prescription that you would make for external piles would not meet the indication if the case be one of the internal variety; nor would the remedy for the non-bleeding tumor answer for the one that was protruding. Then, too, it must be known if the tumors, of whatever kind, are inflamed or not.

FOR instance, external piles that are in the inflamed state give very much the same line of symptoms that inflamed *internal* piles do. Yet it can readily be seen that the external variety calls for an astringent that the internal pile would not bear; a bleeding pile needs very different treatment from one that does not bleed; and protruding piles need special treatment, especially if they resist reduction.

Most authors divide external piles into two varieties, viz: (1) External tag of skin; (2) Venous tumor. Many people have a superfluous amount of skin around the anus—*tags* of skin. And there are many ways that such tags can be made to inflame. When so affected they constitute one of the most painful varieties of piles. Now, it is easy to understand that the ordinary prescription or prescriptions given for such conditions can result in but little good. The pile tumor in this instance is made up of hypertrophied *skin* tissue, and we know that no absorption of the ordinary ointment preparations could take place.

If an examination reveals this kind of tumor, it calls for more positive results than can be afforded by the use of salves. The maxim in surgery is, that the inflamed surface yields readily to the application of *heat* or *cold*. The same rule holds good in the treatment of *inflamed* external piles. Have applied a *hot* poultice, say, made of flaxseed, often repeated, or cloths wrung out of *hot* water and changed often. If heat is unpleasant to the parts, apply very cold water in same way. If an astringent is necessary, make a solution of sugar of lead. The bowels should be moved daily with an aperient; nothing is better than the proper quantity of Crab Orchard salts. An injection of a quart of moderately cold water into the rectum once a day will do much good. If the patient desires a radical cure, the tumors should be removed. Don't allow any effort to be made to push these tumors inside the rectum.

A case of internal piles requires very different treatment from the class just described. Hemorrhoids of this character may be of long standing and with but little history of causing any trouble, outside of the inconvenience of protrusion and staining of the linen. There are two dangers, however, that always threaten the person the subject of internal piles: (1) Hemorrhage; (2) Strangulation of the tumors. The hemorrhage even from a small capillary pile may be so great as to endanger life; and strangulation of the pile mass might terminate in sloughing, accompanied with dangerous hemorrhage, or sepsis. Internal

piles that do not protrude or bleed need very little attention. It is when they become inflamed, bleed, or ulcerate that the doctor is consulted.

An ointment prescribed indiscriminately is no more appropriate in this variety of piles than in the external variety. Indeed, I believe that if the doctor would direct the patients *suffering* from internal piles to use the application of cold water to them when protruded, and to inject cold water when they are not protruded, more solid comfort would be had than from the great combination of ointments that are usually prescribed.

If, then, the person who is troubled by the *protrusion* of internal piles is directed to bathe the pile tumors each time after an evacuation in cool water, and to use an injection of cool water to move the bowels every morning, to annoint the mass with plain vaseline, then push it back, and under no circumstances to use paper as a detergent, he will get much comfort out of the directions.

If internal piles both protrude *and* bleed, a little different treatment is necessary, although the plan just suggested would be very applicable. In addition, however, it would be necessary to look after the hemorrhage. There was an old idea that the bleeding from piles was salutary. Of course in the majority of patients this doctrine is pure nonsense, and to inculcate it would bring about much distress. In the man of robust habit who is given to drink, no great harm could be done him if the portal system was drained a little by a hemorrhage or hemorrhages from the rectum. But to apply this to the people of all grades of health who have piles would be criminal.

If, then, it is a case of *bleeding* piles that you are to treat, let me suggest first, that you do not take the patient's diagnosis, but make a rigid examination. Internal piles can not be felt with the finger when quiescent in the rectum. It is best to see the patient just after stool, or have him take an injection of hot water and strain down, the piles then come in sight. If, as I have said, they are of the bleeding kind, having no distinct spot at

which a *spurt* can be seen, it is best to apply an ointment to them after thorough washing with *cold* water. The following will be found efficacious:

℞ Vaseline ..... ℥i;
Acetate lead ..... grs. xx;
Pulv. opii ..... grs. xv;
Balsam Peru ..... ℥i.
M. Ft. ung. Sig: Apply to piles after washing with cold water.

Tannin can be substituted for the lead if thought best. The treatment and rules laid down for external piles should be followed in this class, with the addition suggested.

If protruding internal piles are accompanied with much pain, some complication exists, usually ulceration. If, therefore, pain is a factor in the case, something more than the treatment of an uncomplicated case must be employed. Washing off the parts with *hot* water will be found more pleasant to the patient than the use of cold, and after a thorough bathing this prescription will go far to allay pain:

℞ Mur. cocaine ..... grs. xvij;
Ext. opii ..... grs. xx;
Ext. belladonæ ..... grs. xvi;
Lanolin ..... ℥i.
M. Sig: Apply, after washing with hot water, and then return mass.

The bowels should be moved each day with injection of tepid water. At bedtime use a suppository like this:

℞ Iodoform ..... grs. iv;
Morphiæ sulph. ..... gr. ⅓.
Ft. suppository. Sig: Insert at bedtime.

Patients often come to physicians to be treated for "itching" piles. The term is a misnomer, for piles do not itch. If any itching exists, and piles really exist, it may be that the discharge of mucus, etc., from the rectum has irritated the contiguous parts, and caused itching. Usually, however, when the patient complains of itching as the *prominent* symptom, it will be found to be a case of pruritus, and not piles at all. If, however, you find

a case of piles with an itching of the surrounding parts, the following will serve you well:

℞ Vaseline..... ℥i;
Ichthyol..... ℥i.
M. Sig: Apply often.

Or,

℞ Cosmoline..... ℥i;
Menthol..... ℥ss;
Hyd. chloral..... grs. xx.
M. Sig: Apply.

After all it must be admitted that treatment of any kind given hemorrhoids is simply palliative. No ointment ever cured well-defined tumors which constitute the hemorrhoidal disease. External piles that have become inflamed can be after a time made quiescent by the plans of treatment given here. But it must be remembered that the tag of skin is left, and will again take on inflammatory action with sufficient provocation. And in the treatment of internal piles by the palliative plan the pile simply goes back to a non-inflammatory condition, to be aroused again by the first "attack." But it so often happens that patients will not submit to have the radical operation done that it is best to "have on hand" such remedies, and to be familiar with such methods as to quiet the patient of all complications. That man is the best physician who tries to prevent his clientèle from becoming sick. A great favor could be done your patrons by telling those who have no hemorrhoidal disease how they can prevent it.

It sometimes happens that a discharge, dysenteric in character, is excited in young children by the existence of a polyp in the rectum. Whenever a child passes blood at stool it is well to bear this thought in mind. Internal medication avails nothing in such cases. It is not essential that a history of protrusion should be given, for many polyps have their origin high up the rectum and the pedicle is not of sufficient length to allow the little tumor to protrude. After a diagnosis is made, of course the only rational procedure is to remove the growth, when it will be found that all dysenteric(?) symptoms will disappear.

With Our Exchanges.

DISEASES OF THE RECTUM.

A Contribution to the Surgery of the Rectum.—Arpad G. Gerster, M. D., of New York, Surgeon to the Mount Sinai and the German Hospitals, writes (Annals of Surgery):

In complying with the request of the President to introduce for discussion the subject of rectal surgery at this meeting of the American Surgical Association, I have understood that my task was to be rather an account of my personal work than an academic representation of the present status of this discipline as practiced at the various centers of surgical endeavor. I have caused a computation to be made of the number of cases of rectal ailments treated during the four years ending January 1, 1893, in the surgical service of Mount Sinai Hospital, New York. The facts brought out of the records by Dr. Brodhead, the house surgeon, are to serve as the substratum upon which are based the conclusions and opinions here expressed.

During the four years mentioned 557 patients suffering from rectal ailments were admitted to Mount Sinai Hospital. The largest proportion of these, 280, were classified under the diagnostic heading of hemorrhoids. Next in frequency were cases of fistula, which, including in their number the more acute forms of ischio-rectal trouble leading to fistula, were 167. After fistula, carcinomata of the rectum, 17, were most numerous; then came 11 cases of prolapse, 6 cases of cicatricial stricture, 6 cases of chronic ulcer of the rectum, 7 cases of polypus, 1 case of multiple adenoma, 2 cases of congenital atresia of anus, and 1 of the rectum; finally, 4 cases of anal fissure.

Hemorrhoids. I have derived the impression, from a service extending over about thirteen years at Mount Sinai Hospital, that anal and rectal ailments are very prevalent among the Russian and Polish Jews, who make up the bulk of our patients there. And among these complaints hemorrhoids are the most common. Of 280 cases, 14 were not subjected to any operation for various reasons. Of the 266 patients operated on, 156 were

treated by the clamp and cautery, 63 by the old method of ligaturing and ablation, 47 by the method of excision and suture, simultaneously devised by Drs. F. Lange, of New York, and Whitehead, of England, and finally in 6 cases the nodes were simply incised for the evacuation of a clot.

As to the indications followed in the selection of one or another mode of procedure, the following may be said: In recently developed and moderate cases a systematic depletion of the portal circulation by saline laxatives, aided by cooling enemata and the external application of an ice-bag, were often found to be sufficient to remedy the evil. Where a prolonged prevalence of a morbid state and frequent recrudescences of acute inflammation have brought about lasting changes of the terminal area of the hemorrhoidal veins an operation was deemed necessary.

Decided preference was given to the clamp and cautery method, which was always chosen in the absence of a special indication in favor of another method. Where the element of time weighs as heavily as it does in the overcrowded operating-room of our hospital the clamp and cautery have great advantages. After a thorough stretching of the sphincter, preceded by a sufficient preparation of the gut by adequate laxatives, this process has given us invariably satisfactory results. Not once was there a disagreeable complication observed, nor a faulty result noted, and the patients suffered very little inconvenience or pain. A perfect evacuation of the bowel and a thorough stretching of the sphincter are the conditions upon which mainly depend the patient's comfort. Next to this, we found of importance an early action of the intestines. Instead of constipating our patients for five or seven days by filling them full of opium immediately after the operation, the rule was observed to produce an evacuation on the third or, at the latest, the fourth day after the operation. This was done by administering a dose of salts early in the morning; an hour after that an enema consisting of four ounces of sweet oil was given, to be followed in about half an hour by a large injection of soapsuds, which generally resulted in a painless and easy evacuation. After the stool the anus was washed and a narrow strip of iodoform gauze was slipped into the breach.

As to the final result, these have to be noted: To avoid the occurrence of stricture, subsequent to the use of the clamp and

cautery, the former should be applied so as to stand radially to the anal aperture, and it is of importance not to embrace in the clamp more than the uppermost third of each hemorrhoidal node. Finally, to avoid hemorrhage, it is important to use moderate, that is, a dull cherry-red heat which will effectually shut off all vessels. If the cautery is too hot the nodes are burnt off too quickly, and the eschar is not deep enough. Hence, when the clamp is taken off and the slender thrombi are disturbed, arterial hemorrhage is apt to set in, and will require individual ligaturing of the bleeding vessels. Another safeguard against hemorrhage is the *tampon tube*, a piece of stout rubber tubing, four inches in length, wound about with a piece of iodoform gauze, well greased and then slipped into the anus, its proximal end reaching beyond the sphincter. While permitting the escape of flatus, this obturator will control oozing better than any thing else, besides serving readily in the administration of the first enemata. Of course this tube has to be plugged up after the first oil and soap-water enemata. As to the use of opiates the general rule was this, to give the patient a small hypodermic injection of morphine for the first night, and none afterward. Of course this rule suffered occasional exceptions, but in general was well observed. It was gratifying to see how rapidly the patients recovered their appetite, and how soon, generally on the sixth day, they were able to leave the bed. Care was taken to cause a daily stool by enema, and this, together with the absence of the effects of opium, had a most excellent influence upon the physique and morale of our otherwise abnormally sensitive patients. The average duration of the after-treatment was three weeks.

Next in frequency were the operations by *ligature*, which was employed in sixty-three cases. Though not very pleasant to the patient, I consider the ligature of hemorrhoids a very safe and very convenient method of treatment in the hands of the general practitioner. No special instrumentarium is needed, the pocket-case furnishing all the requisites, and the procedure is, judging from our experience, also an entirely safe one. Only in one instance did a serious complication occur, when hemorrhage set in on the second day, apparently from slipping of an unsafely applied ligature. Considerable blood was lost before the facts

were ascertained, and the patient became very anemic and restless after the expulsion of large quantities of liquid and clotted blood from the rectum. An anesthetic had to be given to insure tolerance, when, under the guidance of a speculum, the bleeding artery was easily found and deligated. The patient made a somewhat delayed but perfectly good recovery. Another drawback of the ligature is the prolonged and severe pain felt by most patients, necessitating the steady use of opiates until the ligatures are cast off. Finally, it was noted that patients whose hemorrhoids were ligatured almost invariably required the use of the catheter, which had to be used much longer than after the other operations. The ultimate results and the duration of the treatment were not different from those observed after the use of the clamp and cautery.

Whitehead's or Lange's operation was generally reserved for the more aggravated cases characterized by prolapse of the anal and rectal mucous membrane. A few years ago a hot and somewhat intemperate controversy took place in one of our medical journals regarding the merits of this method. A rising light on the field of rectal specialism condemned the operation off-hand, basing the condemnation upon a purely theoretical basis, not having at that time ever done this operation himself. To gain a personal knowledge of the facts bearing upon the question I commenced to perform the operation on selected cases, and have even permitted my house surgeons to do it, so as to test the method in more and less skilled hands. In addition to the forty-seven cases operated upon at Mt. Sinai Hospital, my personal experience, gained in the German Hospital and in private practice, embraces twenty-four other cases, that is, a total of seventy-one, an adequate number to justify a competent judgment of its merits and disadvantages.

First of all, the operation is perfectly rational and well conceived. Properly performed, it is not as rapid as that by ligature or the clamp and cautery, but it is neither very bloody nor technically difficult. Its results, if the essential points of the easy technique are faithfully adhered to, are more brilliant and rapid than those of any other known method. It is not fair to charge ill results due to imperfectly done operations to the method. As in Lange's and Whitehead's, so has this operation

in my hands yielded invariably good results. Among the cases operated on by the less experienced men belonging to the house staff two forms of failure were to be noted. First, the failure to get complete primary union, leading to the establishment of a semicircular or *circular cicatricial stricture;* and, secondly, *ectopy of the anal mucous membrane,* caused by the unnecessary removal of circumanal integument. Profuse hemorrhage during the operation as well as the two other shortcomings are not inherent to the operation itself, but are purely the result of improper and unsurgical management. I shall not weary you by a description of the steps of the operation; and let it be sufficient to say that the average duration of the operation was thirty minutes; that very little pain was experienced by the patients, and that their bowels were generally moved about sixty hours after the operation in the manner described above.

Very great pains were taken in the preparation of the bowel before the operation by thorough purgation and daily enemata for at least three days. On the morning of the operation, after a large enema had cleansed the gut, an opium suppository was slipped in. To prevent soiling of the field by feces during the operation, a large sponge, secured by a string, is pushed high up into the rectal pouch, after which step the mucous membrane and skin of the breach are thoroughly cleansed with a sponge, held by forceps, soft soap and water, and finally a sublimate irrigation. During the operation strict cleanliness must be observed to insure primary union. Three times in forty-seven cases we failed to get primary union. Either the stitches were put in with too much tension and cut through prematurely, or, the wound being infected, suppuration set in. In every one of these cases a circular cicatrix appeared, and was tending to the formation of stricture. In each case excision of the cicatrix and suture remedied the trouble. In one case, where too much of the outer integument had been removed, we had to deal with a condition more difficult to remedy. A not inconsiderable ectopy or eversion of the anal mucous membrane took place in this case, and gave rise to ulceration and hemorrhage. I suggested a plastic procedure, but the patient was unwilling to undergo another operation, which would confine her to bed for two weeks. Hence, I have contented myself by superficially searing the anal margin with the

actual cautery, and doing this repeatedly until the mucous membrane became toughened and dry, somewhat resembling outer skin.

Altogether, we may say that the operation is indicated in cases of extensive protrusion of the anal mucous membrane; that it gives excellent results if performed properly by a person who has had a good surgical training, and who has seen the operation done properly. To an infrequent operator in general practice, who would have to operate with inadequate assistance, the operation can not be recommended.

Fistula in Ano and Ischio-rectal Abscess. Of well-established cases of fistula in ano 118 were operated upon. As regards their importance, it can be said that in extent and variety a great diversity was observed, hence the length of time needed for the cure also varied from five days to sixty-five days, the average being eighteen days. In very extensive wounds, caused by the division of the bridge, especially where the topographical relations of the wound were simple, a very considerable shortening of the time required for healing was accomplished by a careful excision of the pyogenic membrane of the fistula and immediate cat-gut suture of the wound in tiers. In twelve cases excision and suture were employed with very gratifying success. In each one of these six or eight weeks would have been required to bring about closure of the wound by granulation. The suture permitted us to heal these extensive wounds in most of the cases in two, three, in the worst ones in four weeks. All the patients were cured.

Among the forty-nine cases of ischio-rectal abscess there were some dreadful forms of destructive phlegmon of the ischio-rectal connective tissue. A considerable proportion—over one third—occurred in diabetic subjects, and in some of the cases the process involved scrotum, perineum, and the space beyond the pelvic fascia. Three of the worst and most neglected cases died: one of exhaustion, shortly after all the recesses and sinuses had been laid open by the knife; a second one of metastatic gangrene of the lung; the third patient of a gangrene of the entire scrotum and perineum. In all of the cases the tendency to the spread of the destructive process was very marked, and, I believe, was considerably accentuated by the fact that previous to the

admission of the patients to the hospital the trouble had been fomented and encouraged by the prolonged use of poultices. The therapy employed was always a very energetic and comprehensive one, consisting in converting the irregular burrows into a simple and shallow, often very extensive, wound. It was gratifying to see the immediate improvement in the condition of the patients, and most notable was the circumstance that where, during the progress of an active suppuration, considerable quantities of sugar, up to ten per cent., had been observed in the urine, this proportion of sugar was either very much diminished or in some cases entirely disappeared after every thorough-going operation. I hardly need to say that in many of the cases belonging to this class months were required to fill up the extensive gaps caused by sloughing and subsequent incisions, the longest period of treatment noted being one hundred and twenty-four days. In one case a secondary plastic operation by suture notably shortened the time of treatment.

Ulcers in Rectum and Fissure in Ano. Six times chronic ulcers of the rectum came under treatment. In three instances the affection was the result of operations performed months or even more than a year previous for hemorrhoids, by practitioners not connected with the hospital; once the operation was by ligature, twice by the clamp and cautery. In every one of these cases the presence of the elevated, smoothly-granulating ulcer was the cause of a remarkable train of nervous symptoms involving the urinary organs. One of the patients, a very busy physician, suffered from excruciating pain at defecation, radiating to the thighs and the penis, and frequent and painful micturition. He had become an habitual morphinist, and had submitted to repeated operations, consisting of stretching the sphincter and the application of chemical caustics and the actual cautery to the ulcer, which was situated anteriorly just above the proximal margin of the sphincter and corresponding to the prostate. The size of the smooth and pale ulcer was that of a three-cent piece. On excision it was found the base of the indolent ulcer consisted of a thick cicatricial mass extending through the entire thickness of the gut. This mass was excised, and the resulting rather extensive wound was united by three tiers of buried cat-gut sutures. From the moment of the excision all the reflex pains

disappeared, and the patient ceased to use morphine. In every one of the other cases excision and suture were employed with satisfactory results.

Fissure in ano complicating hemorrhoids were observed in eighteen cases. Four times it occurred without any complication. The treatment consisted mostly in stretching the sphincter and a shallow incision of the superficial fibers of this muscle. In three cases, however, where much cicatricial matter had been deposited about the fissure, the entire mass was excised, and once, where this excision extended to a considerable depth, the buried cat-gut suture was resorted to.

Cicatricial Strictures of Rectum. Extensive and most intractable ulcerative proctitis was observed six times, the patient being in each case a woman. As to the previous history, syphilis was indubitably present only in one case. Twice, however, a history of suppuration of the Bartholinian gland could be assumed. In four cases linear proctotomy, followed by gradual dilatation, brought about a moderate alleviation of the disorder. Twice, where the limits of the multiple strictures and ulcers could not be reached by the finger tips, and where manipulations in the organ usually led to febrile seizures and much local pain, inguinal colotomy was successfully done and brought relief to the embarrassed defecation. Subsequently, in one of these cases, excision of the diseased section of the rectum was practiced, with fatal termination due to collapse from acute anemia. This case will be referred to later, in speaking of colotomy and excision of rectum for cancer.

Prolapse of Anus. Protrusion of the anal and rectal mucous membrane was treated in eleven cases, mostly of children of tender age. In these the linear application of the actual cautery, producing from four to eight longitudinal scars, which passed through the entire thickness of the rectal and anal wall, was generally followed by a cure. Once, in the case of a lad thirteen years old, repeated applications of the thermo-cautery were found unavailing. Here we had to deal with a very lax sphincter and a prolapse of the mucous lining of the breach which measured three inches. Two lozenge-shaped segments of mucous membrane and skin, five inches long and an inch wide, the widest parts corresponding to the anal margin, were excised, one

anteriorly, the other posteriorly. Then the edges were united by a number of tiers of buried cat-gut sutures in the longitudinal direction. Defecation was brought about under the usual precautions on the third day, and the wounds healed throughout by first intention. The final result was very satisfactory.

Atresia Recti and Ani. A new-born male child was admitted with enormous distension and vomiting, due to atresia recti. Colotomy was performed by Dr. Wyeth, when it was ascertained that the rectum was absent, the descending colon terminating in a blind pouch. The patient died of exhaustion shortly after the operation. In another case of a male child anal atresia was successfully relieved by incision and subsequent proctoplasty. In a third case, where, in a girl, anal atresia was combined with congenital recto-vaginal fistula, defecation being done through the vagina, the perineum was split open, dividing the bridge of tissue between the anus and the vagina. Then the rectal and vaginal cylinders, together with the perineum, were restored as in a laceration of the perineum.

Polypus of Rectum. Rectal polypus was treated in seven cases, mostly children, by ligature and ablation. The eighth, a most remarkable case of *multiple adenoma of the rectum,* deserves special mention. The patient, a poorly-nourished anemic boy of eighteen, stated on admission that he had been suffering from pain and protrusion of a tumor on defecation since his twelfth year, the trouble becoming worse continually. Examination under anesthesia showed that the rectal pouch was literally crowded full of soft, easily bleeding, pedunculated masses, the upper limit of which could not be reached by the finger. The sphincter being lax, it was very easy to evert the lowermost part of the rectum, when the protruding masses appeared to be as large as a large fist. They consisted of innumerable single and lobulated tumors, which were attached by pedicles of varying thickness to the rectal wall, and so close to each other that it was difficult to find even a small patch of normal mucous surface. All of these masses which could be conveniently reached by the aid of two Sims vaginal specula were either burnt off at their base with the thermo-cautery, or, where their pedicles were rather massive, were first tied off and then removed. A careful microscopical examination of the neoplasms showed them to be

true adenomata. The patient's wretched condition forbade a further extension of the measures directed against the neoplasms on that occasion. Under forced feeding matters improved so much that four weeks after the first operation a second, more extensive attempt was deemed expedient. The coccyx and lower half of the sacrum being exposed by a median incision, the former and the lower segment of the latter up to the third sacral foramen were removed. The rectum was then laid open by an incision extending from just above the sphincter to the stump of the sacrum, whereupon the organ became very accessible by means of broad retractors. The adenomata, located well up in the sacral excavation, were then removed either by ligature or those that were attached by a broad base by the actual cautery. As a relapse was probable, the wound was left open to permit of a continuous supervision of the site of the disease, or eventually of a repetition of the treatment. This observation was carried on for two months subsequently, and a number of adenomatous nodules were again and again destroyed. Should the tendency to relapse not diminish, an extirpation of the diseased part of the gut will have to be considered, otherwise the gut will be closed by a longitudinal suture.

Carcinoma of Rectum. In seventeen cases rectal cancer was observed, and the diagnosis was in each case confirmed by microscopical examination. Five times the patients declined to submit to operative treatment of any kind; three times, in the absence of stenosis and on account of far-gone emaciation and cachexia, no operative measures were thought to be advisable. In the remaining nine cases inguinal colotomy was done five times, with one death. Kraske's excision of the rectum was performed three times, with one death, and once the old-fashioned perineal extirpation was successfully resorted to. As previously mentioned, inguinal colotomy was done twice, and Kraske's method of extirpation of the rectum was performed once for ulcerative proctitis. The extirpation, which was exceedingly difficult and bloody, resulted in the patient's death from acute anemia; the colotomies were successful.

In considering these methods we have at our disposal seven colotomies and five extirpations of the rectum. The experience gathered from this material may be summarized in these remarks:

Cicatricial or neoplastic stenosis of the rectum was always considered an ample indication for the performance of colotomy, which was successful and afforded great relief in six cases. Though it was mostly found to be a comparatively easy operation, twice a serious difficulty was met with in the shape of a short or retracted mesocolon. In one case, that of a very fat old man, suffering from far-gone and high-reaching cancer, the mesentery of the sigmoid flexure was a hard, unyielding, and shrunken mass of cancerous tissue. The gut was so closely attached to the pelvis that its fixation to the abdominal wall was a matter of much labor and great difficulty. The patient was suffering from a chronic bronchial catarrh, with a tenacious secretion, and had contracted the bad habit of hawking and coughing in a violent manner to clear his windpipe. Silk sutures were used, and the gut was incised on the third day after the operation, and the mucous membrane was then stitched to the skin with an additional row of sutures. On the fifth day, when success seemed assured, the distal row of sutures gave way during a fit of coughing, and small intestine prolapsed and became soiled with feces. The patient did not notice the accident, and it was noticed only when, after another access of coughing, a coil of gut slipped out from under the dressings. It could not be ascertained for how long this state of affairs had existed, but the mischief proved to be irreparable. About three feet of intestine was found thoroughly smeared over with semi-liquid feces and intensely congested. Though they were carefully cleansed and easily replaced, an intense septic peritonitis developed within a few hours and carried away the patient.

In the other case colotomy had to be done for ulcerative cicatricial stenosis in a young woman. The mesentery was found short and rigid as high up as the splenic flexure, and rather than make another incision I determined to attack the colon at the usual place as well as could be done. Here, as in the former case, the formation of a spur was out of question, but, the patient being very lean and emaciated, fixation of the gut was finally accomplished. The absence of a spur was found to be a great drawback, as considerable quantities of feces escaped into the distal part of the rectum to regurgitate or to cause much suffering during their passage through the strictured and ulcerated

bowel. Later in this case extirpation of the rectum was performed at the urgent request of the patient, and the shortness and rigidity of the mesorectum was found to be a formidable obstacle to the safe performance of the operation.

Prolapse of the intestinal mucous membrane, or rather eversion of a section of the gut, was observed once, in a case of ulcerative and strictured rectum. With a view to a future extirpation of the diseased part of the organ, colotomy was done rather high up, and in a portion of the colon having a long mesentery. In this case the colon was surrounded by an unusually massive deposit of fat, and fixation of the gut was rendered somewhat difficult because the determination of the proximal and distal portion of the colon could not be satisfactorily made. Hence it happened that the loop of intestine selected for fixation was attached with a twist, and defecation requiring more than the normal amount of intra-abdominal pressure, together with the causes mentioned before, led to a considerable prolapse. But, as it was intended to close the artifical anus after the extirpation of the rectum, this inconvenience will be remedied.

Under ordinary circumstances colotomy was done as follows: Whenever possible, the patient's bowel was prepared by a thorough purgation, then the longitudinal incision was made two inches to the inward of the left anterior superior spine, beginning two inches above Poupart's ligament. After division of the peritoneum this was attached to the skin by a few silk sutures. Then the colon was sought for and withdrawn. Whenever extirpation was considered probable, the most proximal part of the colon was attached to the abdominal wall that could be drawn to and comfortably fixed in the wound. The tension produced by this mode of fixation would also prevent prolapse. To ascertain whether the coil of gut selected is parallel with the axis of the colon or is twisted, Czerny's expedient was found very useful. If the coil is as it should be, the finger, if passed down to the posterior pelvic wall along the gut and its mesentery on the outside, should remain on the lateral or outer side of the mesentery; that is, the mesentery should be felt as a screen extending upward and downward and preventing the passage of the finger-tip to the inner or medial side of the gut and mesentery. If the gut is twisted, the finger, slipped down from the lateral or outer side

of the gut, will find its way to the inner or medial side of the mesentery. The colon is now withdrawn sufficiently to bring the mesentery of the middle of the coil to the surface, a long, well-disinfected shawl-pin is passed through the skin, peritoneum on one side, then through the mesentery behind the gut, then through peritoneum and skin on the other side. Finally a single circular continuous suture is run round the incision, uniting parietal peritoneum to the gut, if the intestine is not to be incised immediately. Should this be deemed necessary, two superimposed peritoneal sutures will give better security against fecal infection. To prevent traction or compression of the attached coil of gut by the dressings, we have been in the habit of placing over the wound a semi-globular tea-strainer, which permitted the escape of all secretions and prevented the adhesion of the dressings to the intestine. Forty-eight hours after the operation, and after the withdrawal of the pin, the gut was opened by a transverse incision reaching nearly down to the mesentery. In the fatal case, mentioned before, the use of a shawl-pin was impossible, and in a similar case it would be proper to close the first incision and to perform colotomy on the right side.

It was claimed that colotomy had the tendency to check the growth of rectal cancer, or to lead to a cure of ulcerative proctitis. In none of the cases referred to here could such a thing be observed; the cancers continued to extend, and ulcerations did not yield to local treatment more readily than before operation. But, on the other hand, it can not be denied that because the feces were diverted from the diseased parts, not only did the patients suffer much less pain, but infection was better combated by irrigation from below, and, there being less retention, the septic and febrile elements of the malady were lessened, and the operation generally resulted in an improvement of the patient's general condition.

Extirpation of rectum was performed by myself in five cases, four time for carcinoma and once for strictures caused by ulcerative proctitis. Of these five patients two died in consequence of the operation, both of acute anemia; one suffering from carcinoma, the other from ulcerative proctitis. In both Kraske's operation was done. The first of these fatal cases concerned a very flabby, fat, and anemic person, aged forty-nine, with a high-

seated circular cancer extending further than the finger could reach. The operation was very easy, and consumed only thirty minutes. The hemorrhage was moderate, but proved to be fatal, as the woman's pulse, which had become thready and rapid toward the end of the operation, never recovered in spite of energetic stimulants. The patient died twelve hours after the completion of the excision.

The second fatal case was the one of a young married woman of thirty, on whom colotomy had been done several months previous to extirpation for very extensive and high-reaching ulcerative and strictured proctitis. As mentioned before, serious difficulty was encountered in this colotomy from shortness of the mesocolon. The patient was not content with the marked improvement of her condition following colotomy, and urgently requested an extirpation, so as to get rid of her artificial anus. Though her general nutrition was vastly better than before colotomy, I earnestly dissuaded her from this serious step, fearing that she lacked strength enough to withstand the shock of extirpation, which, judging from the shrunken and brittle mesocolon found during colotomy, would in all probability turn out a very difficult and tedious process. Finally I yielded to her entreaties, and having plainly warned her of the great risk taken, determined to excise the morbid part of the gut. The operation was very difficult, bloody, and tedious. The rectum was very brittle, tearing whenever it was firmly grasped by hand or instrument, and its attachments to the sacral excavation, and, higher up, to the posterior aspect of the pelvic cavity, were very dense and vascular. The vessels, being imbedded in unyielding inflammatory material, did not retract, and their securing by clamp and ligature also met with much difficulty on account of the brittleness of the tissues. Six inches of the gut were removed, and the stump was attached to the edge of the sacral section. Profound collapse set in immediately after ablation of the rectum, the peritoneal wound was hastily packed with iodoform gauze, and the patient, having been brought to bed forty-five minutes after the beginning of the operation, was subjected to all known forms of stimulation, including three saline infusions into her median vein. These were each time followed by an evanescent improvement of the pulse, but conciousness never returned, and the patient died twenty-four

hours after she had been brought to bed. Toward the end the temperature, which had been subnormal for sixteen hours, began to rise, and just before death reached 104° F., indicating that infection of the wound had probably taken place.

The other two cases of Kraske's operation were successful. In both about six inches of the gut were removed. The patients' general condition being good, they easily overcame the entailing shock. The peritoneal wound was immediately closed by cat-gut sutures, and, the recesses of the formidable wound having been tightly packed with strips of iodoform gauze, the rectal stump was attached to the sacral angle of the external wound by a few stout sutures. None of the operations took more than one hour's time, and the hemostasis and management of the other details of the procedure were rendered remarkably easy where the tissues were found to be normal. The packings were removed on the fourth day after an evacuation of the bowel by a high enema. In the first of these cases, presented to the Academy of Medicine of New York about four years ago, a marked hernial tendency was noticeable in the scar for about a year after the operation, whenever the intra-abdominal pressure was increased in coughing or during defecation. This tendency, however, disappeared, and the patient was perfectly well for four years. A few weeks ago he presented himself with a local relapse, and though his general state was still very good, I declined to interfere on account of a suspicious infiltration, extending far up the prostate and neck of the bladder. Had merely colotomy been done in this case, the patient would have presumably died two or three years ago.

The second successful case was that of a middle-aged, ruddy physician, hailing from the Northwest. Here, also, about six inches of the rectum were excised twenty-two months ago, according to Kraske. The operation, though very bloody, was comparatively easy, and was excellently borne, and the patient was discharged cured eight weeks after it. As a portion of the sphincter was saved, a secondary plastic operation was done in October, 1891. But, the nervous supply of the sphincter having been cut, this measure did not markedly improve the patient's control of the bowel. Still it is to be said that in these, as well as in other cases of rectal excision in which the sphincter had

to be sacrificed, the fibers of the retracted levator ani were uniformly found to form a sort of third sphincter, offering sufficient resistance to a solid fecal column to retain it, or at least give the patient sufficient warning and time to enable him to reach a place of easement. In this case no signs of relapse are visible at the present time, and the patient's physical and mental condition is in every way far preferable to the state of despairing resignation which we observe in those on whom colotomy alone was performed.

In the case of a woman fifty years old, whose very wide pelvic aperture permitted easy access without extirpation of the sacrum, the coccyx alone being excised, four and a half inches of the rectum were removed according to the old-fashioned perineal method. She made an easy and rapid recovery, but as only five months have elapsed since the operation, no conclusion as to its lasting value can be expressed.

As to the preference of the radical operation to colotomy, where the patient's general condition permits it, there can be no serious discussion. But the cases must be carefully selected, and the determining factor should be sought rather in the general powers of resistance of the patient than in the extent of the local disease. I may be permitted to mention here that one of my patients, from whom I removed, at Mount Sinai Hospital, six inches of cancerous rectum nine years ago, and who had a relapse three months afterward, for which a second time additional two inches of the gut was removed, is perfectly well to this day. The sphincter was saved here, and at the second operation the rectal stump was brought down to the original site of the anus and attached there. The patient now exhibits a very effective degree of sphincteric control.

Regarding the mode of performance of extirpation of the rectum a few remarks may not be amiss:

1. Select only cases that, though showing other signs of illness, still possess a very good circulation; in short, whose heart and blood-supply are fairly preserved. Do not omit to prepare the patient by preliminary colotomy where much fecal distress and more or less fever are due to stricture and ulceration, and pay scrupulous attention to your patient's preparatory feeding and general *régime*.

2. During the operation husband your patient's blood by careful hemostasis. Not a drop of blood should be unnecessarily lost. Much of it must be shed unavoidably. Mass ligature, single ligatures, temporary clamping, packing and finger pressure, in short, all the expedients practiced by the modern surgeon for saving blood in abdominal operations, should be scrupulously employed, and to their widest extent.

3. The most painstaking asepsis is an essential condition of success. A serious source of infection is the rectal tube itself. To avoid contamination from this source, the lower end of the diseased rectal segment should be tied off at once, as soon as enough of it has been dissected out to permit of the application of a ligature. In developing the organ from the pelvic cavity as little force should be used as possible, as septic rectal contents may find easy egress through accidental rents long before they are discovered. The surgeon should never go too near the muscularis of the gut, and should keep outside of the circumrectal envelope of fat. Should the gut be accidentally torn or incised, the breach, however small, should immediately be closed by tight suture. As long as the integrity of the gut is not broken irrigation will be unnecessary. But where the gut is accidentally opened copious irrigation will become indispensable.

Both hemostasis and asepsis will be materially assisted by the employment of the posture recommended by Lange, of New York, which resembles Bozeman's, inasmuch as the prone patient's breach is well elevated by a proper support, consisting of one or more hard cushions. I have found that raising the breach end of the table, its legs resting on two wooden chairs, answers the purpose very admirably.

The after-treatment of the wound should be according to the open plan, by light packing, renewed every third or fourth day. A short hot sitz bath, preceding the change of dressings, will be very grateful to the patient and helpful to the surgeon.

The patient should be made to leave the bed as soon as possible, and generally long before the wound is healed. It sounds paradoxical, but it is true, that they are sooner able to walk than to sit up with comfort. If tired, they should be ordered to lie down and rest, but the sooner and the more they manage to walk about the more rapid will be their general recovery.

PILES: THE IMPORTANCE OF RECOGNIZING THE VARIETIES AS DETERMINING THE SELECTION OF TREATMENT.—Herbert Allingham, F. R. C. S., Surgeon to the Great Northern Hospital, Assistant Surgeon to St. Mark's Hospital, Surgical Registrar to St. George's Hospital, writes:

It is with no slight trepidation that I venture to bring such a simple subject before this society to-night. I am, however, induced to do so from observing that there appears to be in the minds of some a great confusion about this malady, there being no distinct appreciation of the varieties of piles and the varieties of treatment which are required under the different conditions. For instance, it is absolutely absurd to think that all piles can be cured by physic, and it is equally absurd to hold that all piles require the knife to effect a cure. In order that medicine and surgery should play the proper part in these affections, it is most desirable to bear in mind the varieties of piles and the different constitutions of the patients. I do not intend here to enter into any minute anatomy of piles, but to discuss them purely according to their clinical conditions.

Careful examination is always most necessary, for it is constantly said a patient has hemorrhoids, when, as a matter of fact, he is suffering from pruritus ani, fissure or ulcer, polypus, or even a blind internal fistula, etc. All these I have seen mistaken for piles, and obviously to treat these complaints as piles is useless.

Piles may be classified as follows:

External.

Internal.

Externo-internal.

A thorough appreciation of these conditions is needed before deciding whether medicine or ointments will be sufficient to cure, or whether surgery is to be called into use.

External piles, strictly speaking, are of two kinds:

1. A small piece of loose skin, which may become inflamed and even suppurate.

2. A small varicose vein, which in like manner may become inflamed or suppurate.

An *attack* of external piles arises from inflammation of the tabs of skin or from the varicose vein becoming thrombosed. This state of things may be started by constipation, not sufficient exer-

cise, or even too much exercise, excessive eating or drinking, and many other causes. All that is requisite when this is the case is to correct the irregularity, give medicine to relieve any congestion of the liver, and apply to the anus some soothing ointment or lotion. Should the pain be great and the little tabs of thromboid veins commence to suppurate, they may be freely incised or even cut away. This, however, is seldom necessary, for these inflamed external piles rarely suppurate, and with laxatives, local sedatives, and rest are cured in a few days.

Internal piles, for practical purposes, should be divided into venous, arterial, and capillary. This division will probably be disputed, for many people, from reasons based on minute anatomical researches, deny the existence of these varieties. Still, for practical purposes, and after all that is the most important point, these conditions exist and must be taken into account.

Venous piles are, as a rule, large bluish tumors which prolapse at stool, and in advanced cases when the sphincter becomes relaxed may come down any time; they bleed occasionally, sometimes very freely. This variety is, no doubt, caused by some stagnation of the venous symptoms brought about by constipation, by excessive drinking or eating, by certain cardiac or pulmonary diseases, or by any intra-pelvic pressure. This class in the early stages may be greatly relieved, in fact frequently cured, by judicious medical treatment, viz., by laxatives, regulations in diet and drink. But it must be borne in mind that if these piles have existed long and the veins have been strained, and so permanently dilated beyond recovery, an operation is the only mode of effecting a cure. In this stage drugs are useless, if not even harmful.

Arterial piles are more generally found in the young adult, and are not, so far as can be found out, due to any portal congestion or other irregularities. They may be, and no doubt often are, hereditary. They are, in the majority of instances, smaller than the venous variety, and are reddish in hue. They do not as a rule prolapse so much as the venous kind, but they often bleed at stool, at times very profusely. From the number of cases I have had the opportunity of watching at St. Mark's Hospital, I am of the opinion that in the treatment of this variety little or no good is to be gained from physic, an operation being the only method of permanently ridding the sufferer of the trouble.

The capillary pile, if it may be called a pile, is a rarer condition. In this class of cases there are not any definite tumors, but only vascular areas, which are very slightly, if at all, raised above the mucous membrane. These are almost nevoid in character. There is no assignable cause for this variety. There is very free bleeding at times, but little other trouble. Cessation of bleeding may be obtained by astringent ointments, but should this treatment fail after a fair trial an operation is then necessary.

An externo-internal pile, as the name denotes, is an internal pile merging into an external one. On examining a patient so affected nothing is to be seen except the external pile; but on gently pulling upon this an internal pile will slip down and become exposed, the external one running into and becoming directly continuous with the internal one. This state of things may be aggravated by constipation, etc., and any physic that relieves this will improve the condition of the pile. However, no absolute cure will be made without an operation.

All these varieties of internal piles, with the exception of the capillary, may become prolapsed and inflamed, and even suppurate. When this is the case a mild laxative should be given, and some warmth or sedative ointment should be applied until the inflammation has subsided. This protrusion and inflammation, with possible suppuration, is nature's attempt at cure; but being as a rule a very feeble and imperfect one, an operation later on is required to complete the cure.

External piles are generally cured by medicine, and proper unguents or lotions. Various internal piles, if the patients have not had them too long, may be cured by medicine, etc. Capillary piles may be cured by astringents applied. In bad or old-standing cases of venous piles, external piles, capillary piles not giving way to astringents, and the externo-internal piles operation is necessary.

Having decided an operation is requisite, a choice must be made between the various methods which may be employed.

They need not all be enumerated, as many of them are obsolete.

Those worthy of mention are:

Ligature with incision.

Crushing.

Clamp and cautery.

Excision.

Ligature with Incision. Briefly, this is as follows: The pile is drawn down by a vulsellum, and is separated with scissors from the muscular and submucous tissues upon which it rests. The incision is made at the junction of the skin with the mucous membrane and is carried up the bowel, so that the pile is left connected by vessels and mucous membrane only. A strong silk ligature is then tied as tightly as possible at the neck of the pile, and great care is required in tying all the knots that are made, as many as three being desirable. The ligatured pile is then returned within the sphincters. The pile is not to be transfixed by the ligature, that is quite unnecessary.

Crushing consists in drawing the pile by means of a hook with a powerful screw crusher, which is tightly screwed up, and the distal portion of the pile then cut off. The crusher should be applied on the longitudinal surface of the bowel, and should be left on about two minutes. The power exerted is very great, and completely crushes the vessels in the stump, thus preventing bleeding after its removal.

Clamp and Cautery. The pile is drawn into a clamp, the distal portion is cut off, and the stump within the clamp is cauterized until all the vessels are thoroughly seared.

Excision. The pile is seized, and is then cut off at its base with scissors, any bleeding vessels being secured.

I must state without reserve that *ligature with incision* is the best of all operations. It is the one that has been practiced at St. Mark's Hospital for many years, and has always proved superior to other methods. It is the quickest to perform, and little blood is lost at the operation. There is little or no fear of secondary hemorrhage. It is certainly the safest in all cases of very bad piles, or when the patient is excessively anemic, or when it has been necessary to operate in those affected with visceral or arterial disease, and, again, it is the safest when the patients have to be left some distance from medical aid.

Crushing, in my opinion, is the next best method, in that as a rule there is less pain following the operation, and the patients get well more speedily than after the ligature, there being no sloughs to come away. This operation should be performed in healthy subjects when the piles are not very large or vascular, and are rather pedunculated. It is more applicable in women,

where the bowel can be commanded by the finger in the vagina should there be any vessels bleeding at the operation.

Clamp and Cautery. The two former operations presenting such advantages, there is nothing to be gained from the use of the clamp and cautery, which is a barbarous proceeding. There are many points against it. It is certainly more painful than the above methods. It is at least six times more fatal. There is more likelihood of secondary hemorrhage when the burnt sloughs separate. There is a greater tendency to contraction after the operation, since a burnt scar is more liable to contract than any other one.

Excision of piles is one of the oldest operations, and is useful in simple cases, or where there is but one pile. This leads me to Mr. Whitehead's operation, which is merely an elaboration of the simple excision method. Mr. Whitehead holds the theory that there may be a pile area in the rectum, and infers that, because a patient has three or four piles in the rectum, all the lower end of the gut is diseased and should be removed. It might as well be argued that because a patient has a nevus in his mouth all the mucous membrane of that cavity should be excised. I have seen many patients after Whitehead's operation, and have observed that contraction is a common after-result, and so, too, is ulceration. There are other disadvantages; a large amount of blood is lost at the operation, almost as much, indeed, as when the rectum is excised for malignant disease. The operation, instead of taking at most ten minutes, generally occupies about three quarters of an hour to complete.

If piles are properly removed by ligature, etc., there is no likelihood of them ever returning. We sometimes hear of cases in which piles are said to recur; that simply means that in the first instance they have not been thoroughly removed.

There are certain points to be considered which depend less upon the variety of piles than on the patient's age and position in life.

We might take the case of an old and wealthy man to whom loss of time is of no importance. Say in addition to his piles he has some visceral complaint. It might be wise for him not to run even the smallest risk of any operation, however slight it might be, but rather to resign himself to a course of perpetual

treatment by drugs, to rest after each action of the bowels and to daily use injections. Even in a case like this abstention from operative treatment would be altogether wrong, if the piles bled badly.

Far stronger are the reasons for operative measures in another typical instance. The patient is young, and his piles prolapse. Taking drugs and local treatment may benefit him for a time, but do not cure him. What will be the result if he continues to take medicine, lies down for an hour or so, and has to administer an injection to himself after every action of the bowels, to say nothing of having to apply ointments and lotions daily? He will soon become a confirmed invalid. The strongest possible protest must be made against such a course of treatment and its consequences. The only sound and honest course to pursue is to advise the removal of the piles once and for all, if the operation is thoroughly done. The patient will then be restored to a natural state of life and be freed from the dangers of becoming valetudinarian.

To return to the general principle of this paper, the high importance of distinctly appreciating the particular kind of pile from which the patient is suffering:

In some varieties which I have mentioned medical treatment is sufficient to cure, and should certainly be employed. For the other varieties it is absolutely futile to continue such treatment in lieu of a resort to operation, and is unjust to the patient from every point of view.—*Medical Press.*

A Bloodless Operation for Hemorrhoids.—Thomas H. Manley, M. D., Visiting Surgeon to Harlem Hospital, New York City, writes:

As hemorrhoidal diseases of the rectum and anus are very common, and very often lead to very grave disturbances of the whole system, any line of treatment which will relieve or wholly subdue them without any serious inconvenience, or without danger to life, will be welcomed by the profession.

At the beginning it may be well to consider for a moment what we understand by the term hemorrhoids. From the etymology of the word we expect to find blood tumors; but in strict truth, in very many cases of so-called hemorrhoids or piles

the vascular system is totally devoid of any implication whatever, the small neoplastic formations which present themselves along the base, annular rim or roof of the anus and rectum, being histologically purely adenoid, papillomatous, or vegetative. It is important that the anatomical distinction be made clear in this instance, for the treatment about to be commended applies especially and almost solely to those anal tumors which are, or were, entirely dependent on a diseased condition of the hemorrhoidal veins; in other words, those which are of a venous origin only.

Another important question arises with respect to the relative frequency of these anal varices, designated piles.

Are anal varices, dilatation of the veins, or those tumor-like formations, either internal or external to the external sphincter, essentially a pathological condition; and, as such, in all cases does it require active radical measures for its abolition?

Very naturally our course will be determined largely in those cases by a definite answer to this question.

If piles are all superfluous neoplastic excrescences, then there can be no question as to our course in all cases.

During the past five years I have made an examination of a very considerable number of supposed healthy recta in the living, and in the dead-house have carefully inspected, under good light, a large number in the cadaver. It was found that in both more than fifty per cent had venous varices of the rectum. Many of the living, in whom varices of large caliber were numerous and extremely turgid, had never suffered from piles in any form that they were aware of.

Therefore it seems to me that the hemorrhoidal tumor is rather a physiologically degenerative condition in man, which in very early and late life is a source of no inconvenience, but which at middle-age is often attended by or associated with such complications as to render it a distinct pathological lesion.

This view is further supported by the fact, that cutting out, injecting or ligating off sundry hemorrhoidal masses will not in all cases cure hemorrhoidal disease. The varicose state of the upper rectal vessels remains, and nothing is wanted to promote their return but the exciting circumstances which caused their irritation in the beginning.

Complicated Hemorrhoids. Diseased hemorrhoids may be divided into three principal classes:

1. Inflamed hemorrhoids.
2. Ulcerating hemorrhoids.
3. Bleeding hemorrhoids.

Besides, we say internal or external, according as to whether they are without or outside the external sphincter or internal to it.

When internal medication has not succeeded, and when palliative topical applications have failed to afford permanent relief in chronic hemorrhoids in their radical treatment by the *bloodless* operation, the same fundamental principles with slight modifications apply to all three classes.

The advantages of the bloodless operation over other surgical measures in treatment are:

1. The operation may be performed with a less number of assistants, and is very simple in its technique.

2. As there is no division of the tissues, the dangers of infection, of abscess, ulceration, and fistula are eliminated.

3. There is no danger from the immediate loss of blood during operation or of serious secondary hemorrhage.

In all cases, the evening before operation, the patient should have the colon well cleared of all fecal matter by a brisk purgative.

In the morning, when every thing is in readiness, the patient should be given from two to four ounces of whisky, the quantity to be gauged according to previous habits, its effects, etc.

After having cleansed, shaved, and scrubbed the integuments over the ischio-rectal fossa we are prepared for the first step in the operation, which is effective *cocainization* hypodermatically applied. Local analgesia, when practicable, is much preferable to pulmonary anesthetics. Our patient is more manageable, and there is no spurting of the feces over the operative field during manipulation.

Cocainization complete, the next and most vital step is complete and thorough *anal dilatation.*

Without this being efficiently carried out all else is a failure. But, to be painless and safe, it must be gradual and steady, or we will rupture the muscle and leave our patient incontinent.

In chronic old cases wherein, owing to malnutrition and interstitial changes in the sphincter, it has parted with its elasticity, laceration is very easy if we do not exercise caution. Thorough anal dilatation accomplishes two purposes of great importance.

First, it opens widely the anal portal, and so paralyzes the levator ani that the lower fourth of the rectum—the part always implicated in hemorrhoids—prolapses through the open vent, when it can be most minutely inspected and radically treated. This, however, is of minor importance compared with the profound effects which dilatation produces on the rectal disease. It is not material whether the hemorrhoids belong to the inflamed, intensely itchy, or irritable type, this stretching exercises a most salutary influence on them.

The third step in simple hemorrhoids will be the separate treatment of each tumor by forcible pressure massage.

Before this is commenced the entire cluster should be wiped clean and dry and be then freely mopped with the cocaine solution.

Now each hemorrhoid is separately seized, close to its base, firmly between the tip of the thumb, index and middle fingers; first, put on a moderate but full stretch, then twisted, and finally so completely crushed that it is reduced to a pulp, and none of the investing tunics remain except the mucous membrane and its under stratum of fibrous tissue. When this has been completed the entire mass is again pressed up inside the sphincter, a suppository of opium introduced, a pad and bandage applied, when the patient is returned to bed. An active but painless inflammation follows, and as a rule, within two or three weeks, resorption and atrophy have so reduced the vascular masses that nothing now remains but their shrunken, diminutive stems.

The ulcerative and hemorrhagic varieties, along with cocainization and dilatation, must have superadded a special therapy appropriate to each.

Since January of this year thirty-two cases of hemorrhoidal disease have come under my care in the hospital and outside.

Many patients have come to me who feared anesthetics, and others who were averse to having any cutting operation performed. In all the permanent results have been eminently satisfactory, and, from the previous experience that I have had

with this procedure, there is no reason to believe that the cures will not be as durable as those effected by other more sanguinary measures which are not without danger in themselves and are sometimes followed by the most lamentable consequences.

Of my latest series of cases, 27 were men and but 15 women; 14 were cases of simple, chronically inflamed hemorrhoids, 9 ulcerating and itchy, and 9 bleeding. Four of the female cases were of the bleeding variety. Of the ulcerating type, in six of them there was a well-marked tubercular cachexia.—*From The International Journal of Surgery.*

Imperforate Anus and Rectum: with Report of a Case.—J. L. Lantz, M. D., of Lamonte, Mo., writes:

Imperforate anus results from arrest of development of that particular part of the epiblast whose office it is, by means of a process of inversion or involution, to develop the anal opening through absorption and penetration of the subjacent tissues until it meets, at a distance of one or two inches from its starting point, its co-laborer—the hypoblast—in this tunneling process.

Imperforate rectum, varying greatly in the degree of its divergence from the normal condition, may exist at the same time with the imperforate anus, due also to lack of development. In this case the bowel is checked or arrested in its downward growth toward the place of its wonted junction with that portion of the epiblast which forms the anus proper, thereby forming, usually, a mere pouch or cul-de-sac in the pelvic cavity, or even in extreme cases above it. In a third class of cases the bowel may communicate with the vagina, bladder or urethra.

Either of these last two cases—imperforate rectum and that in which the bowel opens into one of the pelvic organs or outlet of the same—may exist with a perfectly formed anus proper.

On July 17th I attended Mrs. H. in childbirth. She is a little short of robustness, but well developed, the mother of eight children—seven of which are living.

She gave birth, at the end of a normal labor of about six hours' duration, to a splendidly nourished and developed male child, that is, so far as externals were concerned. The child

evinced vigor by its cry and general demeanor. It nursed as often and with as much apparent relish as infants usually do.

During the 18th the cloths were found, as usually, wet, but nothing indicating the passage of fecal matter.

On the morning of the 19th the mother made the startling discovery that the child had no anus.

Upon arriving, examination showed no indication whatever of an attempted involution for the anus, the bottom of the mediogluteal groove or fissure being quite unbroken.

Although the tissues seemed redundant there was not the least sign of bulging in this region, indicating distended bowel. The belly was drum-like. Assisted by Dr. J. P. Walker, I cautiously incised the skin and deeper tissues layer by layer till the outlet of the pelvis was reached, when, cutting upward and backward at a distance of almost three inches from the skin, the bubbling of gases through the lips of the wound announced the fact that the bowel had been opened. Bringing the bowel down was clearly out of the question.

On the 20th I introduced a grooved director and enlarged the opening in the bowel, and passages were fairly free. The child continued to nurse well, and the belly lost its drum-like character.

On the 21st the child was apparently unwell, from the parent's statement, as it did not nurse as before and was fretful. It died at 8 P. M. on that day. No *post-mortem* was allowed.

The inguinal operation is recommended by some in such cases, yet it has seemed the better plan to persist in the use of legal and fair means to get an opening through the natural outlet than to operate elsewhere. Even though the inguinal offers a little more room for hope of a successful issue in particular cases, yet it is at least unsatisfactory to all concerned.

And here the question suggests itself, Can one tell when, except in a few cases of imperforate anus proper, the inguinal certainly promises more than the perineal operation?

Though one's foresight is not reckoned as good as his hindsight, yet it does not follow that, because an infant dies after the perineal operation, it would not have succumbed to the inguinal, for statistics (that beautiful child so obedient in all to the will of its fond father, the statistician) generally show that to expect very much is to hope against hope.—*The Medical Fortnightly.*

Excision of the Rectum for Carcinoma.—Charles B. Nancrede, A. M., M. D., Ann Arbor, Mich., Professor of Surgery and Clinical Surgery in the University of Michigan, writes:

The patient is a married man, forty-six years old, a gardener by trade. He has always been healthy until the past year. Last spring he began to be troubled with oxyuris vermicularis or "seat worms," which were very irritating. While scratching one day he noticed a tumor, about the size of a hickory nut, which was not very sensitive at first, but later it became very painful. He has not defecated for four months without an enema. His appetite is very good, but eating is interfered with on account of severe pain at stool.

I have not had the opportunity of examining the patient thoroughly on account of the severe pain induced by the attempt. The patient being under the anesthetic, I will proceed to make the examination. I find the anus is involved, and upon introducing my finger into the bowel I find the anterior as well as the posterior part of the rectum is involved, the latter almost as far as I can reach with my finger, but the surrounding tissues do not seem to be infiltrated to any great extent. The sphincters are involved to such an extent that their removal will be necessary. I also find the prostate gland slightly enlarged.

This examination shows the desirability of an operation. The reasons for operating in this case are the constant and severe pain at stool; the inability of palliative treatment to give relief; the malignant nature of the growth allowing the patient only a short life if not removed, and the patient's desire for relief by operation. The dangers have been fully explained to him, and he has been told that complications may arise. We must guard against opening into the peritoneum and the peritonitis following. Some surgeons open the peritoneum purposely to determine the extent of the disease and pack with iodoform gauze. The bladder may be injured, the urethra torn or cut, or the prostate gland injured—any of these complications may result seriously. We have a number of different operations to choose from, prominent among them being Kraske's, Kocher's, or the older methods. Kraske puts the patient on left side instead of in the dorsal lithotomy position. An incision is made along the sacrum, a little to the left, extending nearly to the anus. The soft parts

are dissected off, the coccyx is excised, and the sacro-iliac ligaments divided close to their sacral attachments. The rectum is now readily accessible and may be still further exposed by chiseling off part of the left side of sacrum, being careful not to go above the third sacral foramen. The other operations vary only slightly.

I shall not follow strictly any of the above operations to-day, but use a modification of, you might say, all of them. If I find it impossible or inadvisable to excise I will perform inguinal or lumbar colotomy to relieve pain and delay the probable perforation of the bladder by the growth. The patient, as you see, is placed mainly on his right side, allowing both hips to be elevated, the left being slightly the higher. Even though we may not be able to have the wound perfectly aseptic, we take the usual antiseptic precautions. I make my incision from a little above the middle of the sacrum, going down and encircling the anus. Now I dissect back the soft parts—my assistants stopping the hemorrhage as rapidly as possible, as we may lose a great deal of blood before we get through. I cut through the articulation of the coccyx and remove it with sequestrum forceps. The bowel is now exposed, and I introduce my finger into the rectum and place a "provisional ligature" through the bowel above the growth. Now we will have some one introduce a sound into the bladder to prevent accidental injury to the urethra. Next I make an incision with scissors above the growth, being careful to protect my "provisional ligature," my finger still being in the rectum. The vessels are being tied off as fast as they are cut to prevent hemorrhage, the upper part of the bowel being caught with "suture-ligatures." The diseased portion of the bowel is now excised by carefully dissecting it away from the base of the bladder, prostate gland, and urethra for nearly three inches. I have taken away about three and one half to four inches of the bowel, including the sphincters. I now bring down the bowel and suture it to the muscles and skin at the upper part of the incision. The wound is next partially closed with interrupted sutures and packed with iodoform gauze.

Note. The patient stood the shock admirably, the temperature the next day being 99.8° F., and only on two or three occasions has it reached over 100° F. Enemata have been given, and

patient has defecated with but little pain. The bladder was emptied spontaneously on the first and sixth day after operation; intermediately it has been emptied by the catheter and washed with warm saturated solution of boracic acid. On November 20th, seven days after the operation, the temperature was 98.6° F., the patient was feeling "very well," passing urine spontaneously and regaining strength.—*The Physician and Surgeon.*

Pruritus.—Dr. E. B. Bronson writes, in the Medical Record, entertainingly on the Treatment of Pruritus. As pruritus ani can be included we append what he says:

In the management of *pruritus essentialis,* as of any other disease, the first consideration should be directed to what caused the trouble. The adoption of measures tending to remove any accidental conditions or influences through which pruritus might be occasioned is important. Such causes include, besides various local sources of irritation, certain remote or general diseases, and furnish the *indicatio causalis* in its more limited sense. This, however, states the scope of the problem only partially. What is of more importance is to establish principles of treatment fitted to those more special and more essential causes that constitute the necessary conditions of the disease, and whence we derive the *indicatio morbi.* These causes are traced under etiology, and it is they which must afford the only intelligent basis for the therapeutics of pruritus.

The chief underlying condition in pruritus is hyperesthesia, whether in its common significance of an excessive irritability of the sensory nerves, or in the sense of an excess or engorgement of sensation. The prime indications, then, are to allay irritability and to divert or annul the excess of nervous excitement. Measures to remove local excitants include, first of all, such as directly tend to prevent scratching. To admonish the patient to refrain from this is usually of little avail. Restraint may be possible during waking hours, but at night, when the trouble is always at its worst, and especially during the state of somnolence midway between sleeping and waking, no power can prevent it. It can only be avoided by first mitigating the lesion through the aid of antipruritics. Sedatives when used internally are apt to be disappointing. The degree of general seda-

tion that is required to affect the nerves of the skin, in so intense a disturbance as pruritus often is, affords a sufficient reason why this method of treatment is usually objectionable. Further than this, the depressing and atonic after-effect on the nervous system tends to exaggerate the general hyperesthesia, which is already essentially an atonic condition, and thereby increases the tendency to itching. Especially objectionable are most of the narcotics. The bromides, on the other hand, are often indispensable and may be required in liberal doses. It is important to avoid the enervating effects of loss of sleep, and for this purpose sulphonal or some other hypnotic is occasionally needed. In connection with this two internal remedies, which have been especially recommended by Bulkley, are worthy of mention—they are cannabis indica and gelsemium. The former is known to be a cutaneous anesthetic as well as an analgesic, and by virtue of the former quality should be useful in pruritus.

Carbolic acid is the most reliable and most generally useful antipruritic which dermatologists possess. It was well named by Unna "the opium of the skin."

The following "antipruritic oil" has been much employed by the author for years, both in a local and so-called universal form of the disease, with no more untoward results than now and then a trifling dermatitis when, through oversight, the patient has been allowed to make the applications too frequently or has continued them too long. The formula is:

℞ Carbolic acid ..... ℥i-ij;
Liquor potass ..... ℥j;
Ol. lini ..... ℥j.
Sig: Shake before using.

To correct the disagreeable odor of the linseed oil, a drop or two of the oil of bergamot may be added. Salicylic acid and salol, though less energetic in their effects, act similarly to the carbolic acid. Thymol is also an admirable antipruritic, but on account of its irritating effect can not be used when the skin is sensitive.

Report of Five Cases of Congenital Stricture.—The author, Dr. Werner, of Markgrönigen, reports in detail, in *Memorabilien*, five cases which have come to his notice during a prac-

tice of forty years. (Medical and Surgical Reporter.) He has never seen a complete imperforate anus.

The first case, which happened in 1867, a child, aged twenty weeks, had suffered from birth, defecation being extremely painful and covering a long period of time, owing to the small opening.

The author made a small incision with a bistoury having a blunt end, and enlarged the incision with scissors; introducing a catheter at once incited the bowels to action; the lower bowel was thereby emptied. Three days later the child, having had no movement during the interim, was again suffering considerably, and it became necessary to resort to injections and the use of the catheter, which again gave relief.

One month later the mother reported that the child was well, excepting that it was necessary to use the injection daily.

In February, 1891, the author states that the former patient married and had two children, and two years after the operation she was able to do without the injection, and that now she is enjoying perfect health.

Case 2, seen in 1879; aged five months; always seemed to have pain on defecation, which had always been thin. Four days before being seen she had begun to discharge small, round balls of fecal matter, causing great pain. A female catheter was easily inserted; after being passed three and a half centimeters it seemed to come in contact with a constriction. A further examination with the little finger proved the presence of an unmistakable stricture.

The author performed a successful operation, which he gives at length. The child recovered promptly; was found enjoying good health in 1891.

Case 3, seen first January, 1891; aged eleven months; has been suffering since birth from difficult defecation. Operation same as case second; prompt recovery.

Case 4, seen first August, 1878; aged nine weeks, and had had two previous operations. Previous diagnosis, complete closure of the rectum, which the author seems to doubt. An operation seemed to be successful, as in others.

The communication received thirteen years later said, however, that the boy is well developed, mentally sound, but that up

to his seventh year had had no control over the sphincter ani, and even now can not retain any liquid movement. An investigation of the parts shows a patulous opening, size of a cherry-stone, large enough to admit an ordinary lead-pencil. In passing the finger into this opening one reaches an obstruction, in all probability a healthy internal sphincter. The child suffers no pain, and never passes blood or mucus.

Case 5, seen in January, 1889, was a child two and one half months old, which was so sick and emaciated that an operation was out of the question, and the patient died several days after being seen.

Anal Dilatation.—Dilatation of the anus affects more profoundly the respiration, and consequently the capillary circulation, than that of any other of the lower openings of the body. In health nature secures a daily flushing of the capillaries by the passage of large, solid masses of fecal matter. In cases of chronic constipation and chronic diarrhea the system fails to receive its daily benediction of renewed vitality, and consequently suffers from a lack of it. The rectal plugs may be made to act as a substitute for natural dilatation in such cases, and, unaided by other measures, will often restore the habit of the bowel to a normal state, after which their use can be abandoned. The dilators can be used daily in such cases until they have established a satisfactory reaction and the habit becomes normal, or until the irritation which they sometimes induce causes a feeling of pressure at the base of the bladder or local soreness, when their use should be suspended for a time until such irritation has passed away, after which they can be again employed and their action continued until health is restored or they fail to be of further service to the patient.

Rectal dilators may be employed not only by physicians but may be intrusted to the keeping of intelligent patients to be used at their own discretion. The use of a rectal dilator when one is tired is more invigorating than stimulants. They are also of service in resuscitating a patient from an epileptic seizure or a fainting fit, from opium or other poisoning, and from drowning. They are remarkably efficacious in aiding a new-born infant to its first gasp of breath, and in establishing reaction after pro-

longed illness, as typhoid fever, diphtheria, pneumonia, gastritis, etc. They are good for a tired brain and a tired body, and are perhaps superior to any other general or remedial agent as an invigorating tonic. In severe cases, such as convulsions, it is well to use the larger sizes at once, allowing them to remain in position at the discretion of the attending physician.—*Medical Brief.*

Europhen in Rectal Ulcer and Kraurosis.—Dr. Waugh writes as follows in the Times and Register of July 1, 1893: "The value of europhen was strikingly developed in a lady, aged twenty, who complained of morning diarrhea. Digital examination revealed a deep, sensitive ulcer within the sphincter ani. I ordered europhen ointment to be applied twice daily with the finger, the bowel to be washed out nightly with a pint of hot water, in which was dissolved half a dram of sulpho-carbolate of zinc. Internally I gave three pills of one grain each of iodoform. Within two weeks the ulcer had cicatrized." In kraurosis, or atrophy and dryness of the mucous membrane of the vagina, the writer states that the only remedy previously known was phenic acid. The author employed europhen ointment (thirty grains to one ounce of lanolin) with uniform success. In the first case intercourse had been painful for seven years. On the application of europhen tenderness at once began to subside, and in a few weeks coitus was no longer unpleasant. Complete recovery ensued. The next case was of a lady suffering from great pain at the menstrual period, pain in the back, and continuous hyperexcitability. Faradization of the back was employed, together with europhen ointment as in the preceding case. In two months the cure was complete. The third case was that of a woman who had suffered from kraurosis during the eight years of her married life. Europhen ointment effected a cure in four weeks.

Syphilitic Stricture of Rectum.—Dr. Thos. Wm. Nunn writes as follows to the Medical Press:

A young gentleman in a comparatively early stage of secondary syphilis married, contrary to my most earnest pleading that he should not do so. In due course the wife became infected and suffered from secondary symptoms of the ordinary kind, but superadded to these was acute catarrh of the rectum. In a clin-

ical lecture on stricture of the rectum, delivered at the Middlesex Hospital some years since, I stated that chance had put in my way what I believed to be the missing link in the chain of causation of syphilitic stricture of the rectum.

I have seen the lady, the patient, from time to time since, and she is now suffering from deep fistula in ano.

In the majority of cases of stricture of the rectum the surgeon sees the patient for the first time only when the stricture has established itself, and when the patient may have forgotten the circumstances of the rectal catarrh; and even if she were cross-examined on that point (which would, I think, be very likely), she would probably have regarded the rectal catarrh as some ordinary irritability of the bowel, and would have retained no recollection of it. Having now watched some cases of non-malignant stricture of the rectum for years, I have found that, like syphilitic stricture of the urethra, the severity of the current trouble greatly varies.

For the Formation of an Artificial Sphincter after Extirpation of the Rectum.—(*Centralblatt für Chirurgie*, 1893.) Willems recommends this procedure: After the lower segment of the rectum with the sphincter ani has been removed through a perineal incision, the patient is placed in the lithotomy position. If a large portion can be readily reached and drawn down, an oblique incision is now made over the tuber ischii, about two inches long, extending upward and outward in the course of the fibers of the gluteus maximus muscle. The muscle bundles are separated with a blunt instrument about a half inch from the lower margin of the muscle. The bowel is drawn through this opening and attached to the external skin. If a large portion of the rectum has been removed, the sphincter must be established higher up. The patient is placed in the lateral position and an incision is made through the skin, connective tissue, and aponeurosis, extending from the uninjured right margin of the sacrum downward and outward. The muscle is separated in the manner already described (the tuberoso-sacral and the spinoso-sacral ligaments will also have to be divided), and the bowel attached to the skin. After the artificial anus has been established the wound can be drained and packed.—*Medical News, July* 8, 1893.

Treatment of Hemorrhoids (*Semaine Médicale*, No. 36, 1893).—Engle has employed with good results suppositories of aristol prepared as follows:

℞ Aristol.....4.0;
Extr. opii.....0.15;
Extr. belladon.....0.05;
Quinin. hydrochlor.....1.5.
Cer. alb. q. s.

M. ft. suppos. No. VI. Sig: Use twice daily, morning and evening, after previous irrigation with cold water.

The author also advises after each defecation the application to the lower part of the rectum of the following ointment:

℞ Aristol..... 2.0;
Balsam. Peru..... 4.0;
Ung. simpl.....30.0.

As a purge he administers:

℞ Potass. bitartrat. } āā.....25.0.
Flor. sulphur.... }

Sig: One to two teaspoonfuls two or three times daily.

Partial Ablation of the Rectum.—M. Hartman describes the following operation, which he has successfully performed in cases of annular stenosis of the rectum, either fibrous or neoplastic. The anus having been dilated, the stenosed portion of the rectum is drawn down with a small forceps. A circular incision is then made around the rectum above the stricture and another below the stenosis. The strictured portion of the gut is now excised. The cut section of rectum is then drawn down and sutured to the skin of the anal region. At the end of a week the sutures come away and the rectum retracts, but sufficient fixation has been secured so that suturing is not again required.—*Ibid.*

Cancer of Rectum.—Dr. McCosh makes a posterior or sacral incision, removing the bone part if necessary. If the peritoneum is opened, no attempt is made to close it, but it is packed with iodoform gauze. It is claimed, first, that permanent cure may be obtained after repeated incisions; second, that even if the disease returns, life is prolonged more than after colotomy and greater relief afforded. The mortality from operation is about nineteen per cent., permanent cures about eleven

per cent., and the operation may be successful even when the disease extends higher than the peritoneal attachment.—*American Doctor.*

Hemorrhoids.—J. C. Falk, M. D., Ph. D., St. Louis, finds that the following combination will usually relieve an ordinary attack of external piles:

℞ Cocainæ hydrochloratis .....gr. vi;
Morphinæ sulphatis.....gr. vi;
Extracti belladonnæ.....ʒss;
Liquor plumbi subacet .....ʒss;
Ungt. acidi tannici.....ʒiij;
Ungt. stramonii .....ʒv.

Misce. Sig: Wash the part with water hot as can be borne for several minutes; dry, and apply the ointment freely. Repeat four times daily and after each stool.—*The Medical Fortnightly.*

Rectal Catarrh.—Dr. Strizovere reports "that chronic rectal catarrh can be promptly relieved by irrigating the rectum with a solution of carbolic acid, in the proportion of one half dram to a pint of warm water, this to be repeated morning and evening, being retained about ten minutes each time. Within a few days decided improvement is noticed, and cures have been reported where the disease was of many months' duration."—*Pacific Medical Journal.*

Proctitis.—For proctitis, or inflammation of the rectum, Prof. Hare recommended an injection of not more than two fluid ounces of a saturated solution of chlorate of potassium. It should be injected very slowly and gently, and may be repeated every two or three hours.—*College and Clinical Record.*

GASTRO-INTESTINAL DISEASES.

Treatment of Summer Diarrhea of Children.—T. M. Baird, M. D., of Hot Springs, Arkansas, writes: So intimately is the treatment associated with the causation of this affection, that it is necessary to mention briefly some of the causes before entering upon the treatment.

It appears that different organisms are capable of inducing symptoms of this disease. Varied flora are found in the meconium of newly-born babies which disappear after the establishment of the milk stools of healthy and normally fed infants. On the disappearance of the varied flora, two species of flora seem to predominate, viz., the bacterium lactis aerogenes and the bacterium coli commune. The former is found in the upper part of the intestinal tract, the latter in the lower part, but on the appearance of symptoms denoting "summer diarrhea," the diversified flora again makes it appearance.

Quite a number of micro-organisms have been separated from the stools of children suffering with this affection, but as yet no one organism has been found to predominate. These organisms cause various fermentative processes to take place in the intestinal canal and produce the symptoms of this disease. There are several conditions which favor the introduction of micro-organisms into the child's stomach, or, if they already exist there, to facilitate their development, the most frequent of which are unsanitary surroundings, summer temperature, exposure to cold or damp air, and improper and indigestible food.

Children brought up in the country, who breathe pure, fresh air, are kept clean, drink pure water, and are not allowed to come in contact with draughts or damp air, are not likely to contract the disease unless they are given an improper diet. A much larger percentage of children die in the cities from summer diarrhea than in the country, for the reason that a great many city children are exposed to air polluted with foul-smelling gases, improper ventilation, or live in overcrowded tenement houses amid squalor and dirt; but by far the most frequent cause is an improper diet. Far too many children are taken from the breast

to be "bottle fed," some from necessity, others because their fastidious mothers can not spare time from their *duties* to society to take proper care of their little offspring; the child is left to the tender care of a heartless nurse, and is very likely to be given improper food at irregular intervals; whenever baby cries, the nurse almost compels the little one to suckle from an improperly cleaned bottle, or, worse still, to drink the remains of the last feeding. Again, the child is allowed to eat solid food before nature intended that it should, which acts as an irritant foreign body in the bowels of the infant; not enough attention is paid to the water the child is allowed to drink. Do not micro-organisms infest our drinking-water to a greater extent than the food we eat which has been properly cooked? Drinking-water causes a great many bowel complaints in the infant as well as the adult. Dentition, although a physiological process, may be classed as one of the causes of this affection. A child suffering with swollen gums, who is feverish, fretful, and nervous, is unable to properly digest food; the stools will be found to consist largely of undigested material. If this condition continues for any length of time, diarrhea sets up, which should be treated as if it came from any of the causes generally given in this affection; if the tension on the swollen gum is very great, a lancet will work wonders.

To treat this disease properly, the alimentary tract should be emptied, proper intestinal antiseptics given, the diet regulated; combat special symptoms, and secure proper hygienic surroundings.

The treatment by drugs is of no little importance; harsh and improper medicines should be avoided; first of all, remove all of the contents of the alimentary tract. To a child one year old, give one-half-grain doses of calomel or mercury with chalk every hour, until three doses have been given; follow this with one or two teaspoonfuls of castor oil, in order to secure free evacuation of the intestinal contents. Quite frequently it is necessary to repeat the mercury and oil on the second and fourth day, if there is reason to believe the bowels have not been thoroughly emptied. A cure can not be effected until the alimentary tract is entirely free from all irritating substances. When the evacuations assume a color resembling boiled spinach, it is necessary

to use antiseptics and astringents to control the diarrhea. Subnitrate of bismuth in ten-grain doses repeated every four hours acts as a powerful astringent antiseptic; salol, for its astringent properties, may be given in conjunction with the bismuth. The cautious use of paregoric is a good practice in case there is much pain; when there is much straining at stool, milk of magnesia will be found an admirable remedy to correct it; it may be combined with the aromatic syrup of rhubarb, and given in teaspoonful doses. Dosing the child with drugs will be of no avail, unless the cause is removed; *change the diet.* It is an erroneous idea to suppose the mother's milk the proper diet for a suckling baby under all circumstances. The cause may lie with the mother; that should be looked into. Sometimes it is best to allow the child nothing except a little arrowroot tea for the first twenty-four or thirty-six hours, to allow the alimentary tract to be thoroughly cleaned. A change of diet in itself sometimes has a salutary effect. Don't stop at changing the diet, but see that the bottles, immediately after having been used, are emptied and washed thoroughly in hot water (using a swab made for that purpose), after which the bottles should be filled with boiling water to which has been added a little bicarbonate of soda, and allowed to stand until used again, when the bottle should be washed out with sterilized water. The nipples should not be overlooked, but should be cleaned as thoroughly as the bottles, and allowed to stand in water until again used. Cow's milk ranks next to the mother's as an infant food; if good cow's milk can not be obtained, condensed milk ranks next; be sure that the can is *concave* on top, which shows the absence of fermentation in the contents. Sterilized milk is a very good prophylactic against summer diarrhea, but of doubtful utility as a remedy in the treatment of a case. There are several good "prepared foods" on the market which may be given with the milk. Not enough attention is paid to the baby's drinking-water; it should be sterilized before the child is allowed to drink it, and should be given at regular intervals, and let the child have as much as it wants. If there is much depression present, stimulants should be given at regular intervals; whisky or brandy (burnt) is the best; daily warm baths (90° to 96° F.) should be ordered; if threatened with collapse, give a hot bath, to

which a little mustard has been added. Do not allow the mother to dress the child too warmly; enough clothing should be worn but in the summer a baby should not be burdened with clothes.

Unsanitary surroundings should be corrected, and plenty of fresh air prescribed; order the nurse to take the baby out for an hour or so in the cool of the morning, and to repeat it in the afternoon; but never allow the baby to remain out of doors after the dew has begun to fall, or to be exposed to the hot sun.

If the disease does not respond to treatment in a few days, order a change of climate; the mountains is the ideal place, but if that is impossible, a change of a few miles will in some cases place the little one on the road to recovery.

It is the duty of every physician to encourage those philanthropic people who send the little ones out in the country for a day's outing. Many lives are saved by these floating hospitals, which are daily becoming more popular.—*The Hot Springs Medical Journal.*

Chlorate of Soda in Cancer of the Stomach.—At a meeting of the French Association for the Advancement of Science, in August last, Dr. Brissaud, of Paris, made a report upon the above subject. (Medical Record.) He said that it was an established fact that solutions of chlorate of potash exert a very favorable influence on epithelioma of the mouth and certain forms of cancroid of the face. The successful results obtained with this method induced him to try the effect of the corresponding salt of sodium in the treatment of carcinoma of the stomach. This salt was selected because it is much less toxic and soluble than chlorate of potash, seeing that relatively large doses may be injected into animals without ill effect, and that it is soluble in three times its own weight of water, while the potassium salt requires twenty parts of water for complete solution. He had treated several undoubted cases of cancer of the stomach by the administration of chlorate of sodium in doses varying from eight to sixteen grams (two to four drams) in the twenty-four hours. The results were so satisfactory that if his observations were limited to one or two cases only he would hesitate to publish them, because he might possibly have mistaken cases of chronic gastritis for cancer; for the former, as is well known, sometimes

present all the symptoms of malignant disease. But during the last four years he had tried this treatment with equal success in five successive cases of localized gastric cancer, and it is difficult to admit that an error of diagnosis was committed in each of these five cases; this is the more improbable, seeing that three of the patients presented a distinct epigastric tumor. In every case the treatment was followed by the most remarkable improvement, amounting practically to a cure. The drug was given in doses of twelve, fourteen, or even sixteen grams in the twenty-four hours, and the patients may now be regarded as radically cured. Under the influence of this treatment, the melena, hematemesis, and cachexia disappeared; the appetite returned; and in the three cases in which a tumor could be detected in the epigastrium it gradually subsided until no trace of it was left at the end of six weeks. On the other hand, the treatment failed in a number of cases, for while chlorate of sodium seems to exert a favorable influence on malignant tumors of the epithelial type it produces no effect whatever on the intestinal sarcomatous type of neoplasms. Moreover, the failure in some of these cases is to be attributed either to the fact that cancer had already spread to other organs, or to the presence of complications which were not amenable to the treatment. For example, in one case the liver was already involved when the administration of chlorate of soda was commenced. In another patient, a young woman who had at first experienced some relief from the treatment, the disease suddenly extended to other parts of the body, where it developed with extreme rapidity. She was a patient of Dr. Nelaton; she received sixteen grams of chlorate of soda a day, and in the course of a few weeks hematemesis ceased, appetite returned, and she put on sixteen pounds in weight. This improvement was so remarkable as to suggest an error of diagnosis. At the autopsy, however, cancerous nodules were found in various organs and tissues. In a third case death was due to phlebitis of the inferior vena cava. It can not, therefore, be included in the statistics of the treatment of gastric cancer by chlorate of soda.—*Medical Review.*

Tuberculosis of the Intestines in Childhood.—A consideration of a number of cases of tuberculous ulceration of the intestine shows that the ulceration may be present in every part

of the intestinal canal from the duodenum to the rectum, though probably the ileum and the cecum are more often invaded by tubercle than they are by enteric fever. But remarkably large ulcerations may take place in the rectum, and only a few weeks ago I saw in the *post-mortem* room of Guy's Hospital a large circular ulcer, having a diameter at least as large as that of a half-crown piece.

In a girl, aged twelve, who died at the Evelina Hospital of laryngeal phthisis, and suffered also from disease of the hip-joint, the colon and rectum presented tuberculous ulcers ranging from the size of a sixpence to that of a five-shilling piece.

The pathological associations of tuberculous ulceration of the bowel are numerous, and occur in children with greater uniformity or equality. Thus, tuberculous ulceration may be associated with tuberculous peritonitis, with caseation of the mesenteric glands, with general tuberculosis, with a purely local tuberculosis of the lungs, or ordinary phthisis. In this last case it is often secondary to pulmonary lesion, produced no doubt in the way so common in adults, namely, by the patient swallowing the sputa.

Wesener found that an injection of tuberculous sputa into the stomach failed to produce ulceration of the bowel, but the mesenteric glands were infected. Necessarily, therefore, the gastric secretion spared something. On the other hand, injection of the sputa directly into the bowel caused intense tuberculosis of the gut. Wesener explains the facts by supposing that the gastric juice kills the bacilli, but leaves the spores unharmed. And he further states that the action of the gastric juice is paralyzed by alkalies and by milk, of which the curds surround the bacilli and thus convey them safe through to the bowel. That in ordinary cases of phthisis the intestine suffers so much is, he says, due to the catarrhal condition of the stomach interfering with the protective operation of the gastric juice. The view that the normal gastric juice destroys the bacilli but spares the spores is combated by Fischer; and indeed it may be asked, if the intestine is unprotected because the gastric juice is rendered inoperative upon the bacilli by mucus, why the stomach itself remains exempt in all but the very rarest of cases. It can not surely be said that no phthisical patient gets ulceration of the bowel till he takes to a milk diet.—*British Medical Journal.*

INTUSSUSCEPTION.—The author gives a rather detailed account of nine cases of intussusception treated in Liebermeister's clinic at Tübingen between 1871 and 1891. From this it appears that in some cases intussusception may exist even for months without producing adhesions between the serous coat of the invaginated part and that of the sheath. The onset of the disease is generally acute, and is sometimes preceded by gastro-intestinal affections. In these cases partial or complete obstruction of the lumen of the intestine takes place, accompanied by a stasis of the contents of the bowel above the point of obstruction, with symptoms of strangulation.

In cases where the abdominal walls are not too thick and tympanites is not a marked feature, it is possible, by palpation, to feel either a well-defined tumor or a localized area of deep resistance. The tumor is sausage-shaped, somewhat hard in consistency, and is most easily palpable during the periods when the patient is suffering from severe attacks of colic. The tumor often changes its position in the abdominal cavity as well as the direction of its long axis. In a few cases, when the intussusception occurs in the lower part of the intestine, the tumor can be felt with the finger in the rectum.

Spontaneous cure may take place by expulsion of the invaginated part by way of the rectum, and in some cases reduction of the intussuscepted mass is followed by recovery. As regards treatment, if palliative measures are to be adopted, the patient must be kept in bed and fed upon a diet which leaves very little solid residue. Opium or morphine must be given either *per os* or hypodermatically for the alleviation of pain and the attacks of colic. This is especially indicated, it is stated, when the attacks of vomiting are violent. In some of the cases reported copious lukewarm water enemata, administered through a long india-rubber tube passed some distance up the intestinal canal, were found to be very efficacious.

In those cases in which active surgical interference is requisite the author advises that a laparotomy should be done, followed by a manual reduction of the invaginated part if no adhesions of the adjacent serous surfaces have formed. If, however, reduction in this way is impracticable on account of adhesions, resection of the affected part must be performed and the two ends of the intestine brought together with sutures.

Out of the 9 cases 7 terminated fatally and 2 recovered. According to Leichenstein, in those cases in which expulsion of the invaginated part takes place the prognosis is somewhat better than in those in which this does not take place; the mortality of the former is 41 per cent. while in the latter it is 85 per cent. *Berl. Klin. Woch.*

Diarrhea of Children (Livezey).—In treating diarrhea of infants, children, or adults, we should always remember that the secretions are defective, as indicated by a dry or coated tongue, unnatural color of stools, etc., and to attempt to arrest the watery discharges with such a pathological condition present by opiates and astringents will not last—will do injury, harm instead of good. Therefore first use:

℞ Calomel.....gr. j;
Sodii bicarb.....gr. v;
Pulv. sacch. alb.....gr. xx.

M. ft. chart. No. X. Sig: One every two or three hours until discharges are changed in color and consistency; or hydrarg. cum cretæ, one part, triturated with two or three parts of sacch. lacti. Of this powder give two grains every two or three hours.

These powders will often restore healthy secretory action, and cure the diarrhea alone. If not, follow with small doses of bismuth sub. carb., nux vomica, and ipecac, or a few drops of the following:

℞ McMunn's elixir opii
Tinct. rhei.....
Tinct. camphoræ....
} āā .....ʒss.

M. Sig: From five to ten drops every hour or two, as needed, and according to age of child.

Or, for very young children prescribe:

℞ Syr. rhei aromat.....ʒj;
Tinct. opii camph.....ʒss;
Tinct. cardamon comp.....ʒij;
Aquæ calcis.....ʒvj.

M. Sig: Teaspoonful every hour or two, as needed.

Perforating Peritonitis in a Newly Born Infant with Petrifaction of the Escaped Meconium.—The case is of a child born, as the history showed, some three weeks before term, a foot presentation; no medical attendance; a mid-

wife arrived to assist in the extraction of the head. The child was deeply cyanosed but recovered and appeared normal. Later there was a high degree of tympanites, edema of legs, albuminuria, but in all few marked symptoms of a peritonitis. Death in three weeks. An opening was found in the large intestine of a pin-head size, 22 cm. below the ileo-cecal valve and 33 cm. above the rectal end. Meconium which had escaped from this opening was found to have undergone a kind of calcification or petrifaction. The origin of the injury to the intestine must be sought during the time of the labor, unless we suppose the midwife to have caused the rupture by pressure on the abdomen during the extraction of the head. No history to support the last supposition was obtained. The interest in the case, clinically, lay in the little acuteness of the symptoms on account of the small size of the perforation and its quick and almost perfect closure. The child nursed, did not vomit, had regular stools, complained little of pain, had little fever, and lived three weeks. Pathologically the changes in the meconium were of particular interest. A review of all the cases of perforating peritonitis in the newly born is added.—*Falkenheim and Askanazy, Jahr. f. Kinderh.*

The Diagnosis of Intestinal Obstruction Due to Impacted Gall-Stones.—From time to time one meets with cases of intestinal obstruction which prove—*post-mortem*, or in the course of an exploratory operation—to be due to the impaction of a gall-stone or gall-stones. In some instances the impacted calculus has attained really formidable dimensions. This must of course have ulcerated through into the gut, yet, curiously enough, there may have been a complete absence of any symptoms pointing to previous hepatic colic. In such cases it can be no matter for surprise that the nature and source of the obstruction remains a mystery, only cleared up on the operating-table or in the *post-mortem* room. The occurrence is sufficiently frequent to make it always worth while to inquire whether patients suffering from intestinal obstruction, not otherwise accounted for, have ever shown signs of a tendency to calculus formation or jaundice, thus narrowing down to possible sources of the mischief. The evidence seems to warrant the belief that very large stones, incapable by reason of their size of passing through the common bile

duct, are really productive of less local trouble and pain than smaller concretions, the passage of which along the violently distended duct gives rise to the characteristic paroxysms of pain.—*Hospital Gazette, England.*

Dyspepsia of Nurselings.—The object in view is to render the contents of the stomach more acid, and to facilitate coagulations of the milk in the stomach. Lactic and hydrochloric acids are recommended (*La Riforma Medica*), and in the following formula:

℞ Acidi hydrochloric..... 30 minims;
Aquæ..... f3 ounces;
Syr. simplicis..... f2½ ounces.
M. Sig: A teaspoonful a quarter of an hour after nursing.

Lactic acid is prescribed in the same dose. Lactic and hydrochloric are combined in the following formula:

℞ Acidi lactic..... 15 minims;
Acidi hydrochlor..... 15 minims;
Aquæ..... f3 ounces;
Syr. simplicis..... f2½ ounces.
M.

At the same time boiled or sterilized water should be used.

Appendicitis.—Dr. A. Worcester (Boston Medical and Surgical Journal) concludes:

1. Appendicitis itself is not a serious disease, for it is the inflammation of a worthless part of the body. It is, however, apt to recur. An attack, if left to nature or to medical management, may cause a fatal purulent peritonitis or a localized abscess.

2. Appendicitis can be as readily recognized as can any other local internal inflammation. This diagnosis, however, is easiest in the earliest stage of the disease.

3. No rules can be formulated for differentiating the varieties of appendicitis, and of thus foretelling which cases will recover and which will cause dangerous or even fatal consequences; for there is no known way, except by abdominal section, of ascertaining the rate of progress or the extent of the inflammation in any given case, nor of determining the virulence of the contents of the organ or its anatomical situation.

4. The only rational treatment of the disease is its immediate ending by excising the organ before its death or damage causes like results to its owner. This at the beginning of the attack is a feasible and an absolutely safe operation.

5. The mortality in properly treated cases of appendicitis is *nil.*

Tape-worm the Cause of Rupture of the Intestine.—Dr. F. Dunlap (New York Medical Journal) mentions a case of intestinal rupture occurring in a woman of thirty-one years of age, apparently caused by a tape-worm. When first seen the patient complained of violent pains in the left iliac region, followed in several hours by profound collapse. Rupture of an ectopic pregnancy was suspected, the suspicion being encouraged by the fact that menstruation had been absent for several months. A boggy mass was to be felt in the abdomen, and abdominal section was decided upon and performed. A mass of clot was found in the pelvis, but the pelvic organs were found in a normal condition; nor could any aneurism, which had been thought of, be found. In flooding the cavity a long tape-worm was floated to the surface, and, tracing it toward the head, it was found to protrude from a large, ragged rupture in the small intestine. It was fastened about twelve inches above the seat of rupture. Eight feet of the worm were removed from the peritoneal cavity, and about seventeen feet more were passed from the bowel afterward as the result of an enema. From examination it appeared that there had existed no previous ulceration at the site of the rupture, the ragged gangrenous edges suggesting rather a pressure gangrene. The patient recovered.

Diarrhea.—Diarrhea may be subdivided into as many kinds as there are causes. It is diarrhea when there are frequent wasting discharges with or without pain. It is proper to presume that the patient has been indiscreet in diet, and that somewhere in the alimentary tract there is an irritant. The first indication is to clear the tract by a mild cathartic, supplemented by enemas of one quart of warm or hot water. When this has been thoroughly done, use sterilized fluid diet. Should medicine be thought necessary, subnitrate of bismuth in twenty-grain doses,

repeated every hour, may be sufficient. Should the diarrhea continue after the above treatment, the following will be found of service:

℞ Tinct. opii deod. ..... ℥ij;
Ac. nitro-mur. dil. ..... ℥vj;
Camphor water ..... ℥j.
M. Sig: Take one third to one dram every two or three hours.

Following an attack, careful regulation of the diet during two or three weeks should be enjoined by the physician.—*Exchange.*

For Summer Diarrhea of Nursing Infants.—Toussaint has proved the excellent results by the use of the following mixture in summer diarrheas of nursing infants and those artificially fed:

℞ Papain pur. ..... gr. ix;
Acidi lactic ..... ℥ss;
Syr. simp ..... f℥iss;
Aq. destillatæ ..... f℥v;
Tr. vanillæ ..... q. s.

The milk given to the patients is to be limited in quantity, and the intervals between feeding lengthened. After each nursing a coffeespoonful of the mixture is to be administered. The green stools are soon corrected, and the dyspeptic symptoms relieved.—*Gazette de Hopitaux.*

Knotgrass in Diarrheas.—Dr. Alexander V. Trapeznikoff, of Dvinsk (*ci-devant* Dunaburg or Dinaburg) highly eulogizes (*Rüsskaia Meditzina*) the treatment of diarrhea by the knotgrass or centinode (*Polygonum aviculare, L.* Russ. *Ptitchya gretchikha*, that is, "bird's buckwheat"). The remedy should be administered in the form of a decoction made of one ounce of the herb to four ounces of distilled water, and given a tablespoonful eight times a day. Of twenty-three cases of various diarrheas treated by the writer after the method, as many as nineteen were readily cured, recovery ensuing in sixteen cases in three days, and in the others three in four or five. In the remaining four cases the knotgrass failed to make any impression on the worst of symptoms, but in three of them a subsequent treatment by other means (subnitrate of bismuth with opium, catechu oil, emulsion with opium, etc.) similarly proved inefficacious.

The Treatment of Appendicitis.—Frederick Treves, in an article contributed to the British Medical Journal containing reports of fourteen cases of successful operation for relapsing typhlitis, summarizes the indications for operation in a conservative manner as compared with some American operators. The operation, he maintains, should be done in cases where the attacks have been very numerous; where the attacks are increasing in frequency and severity; where the last attack has been so severe as to place the patient's life in danger; where constant relapses have reduced the patient to the condition of a chronic invalid and rendered him unfit to follow any occupation; where, owing to the persistence of certain local symptoms during the quiescent period, there is a probability that a collection of pus exists in or around the appendix.

Summer Complaint.—

℞ Acidi hydrochlorici dil..... ℥xvj;
Pepsini puri..... ℥j;
Bismuthi subnitrat..... ℥ij;
Syrupi..... f℥ij;
Aquæ dest..... f℥xvj.

M. Sig: Shake bottle, and give teaspoonful before each feeding or nursing to an infant one year old; half the dose to an infant of six months.

This prescription must be made fresh every second day and kept in a cool place, as it is prone to fermentation and would be unfit to use.—*Fitch, Charlotte Medical Journal.*

A Case of Gastro-Intestinal Hemorrhage in an Infant.—The case is reported on account of the rarity of such cases among children. The child was apparently healthy, having been born after a short and normal labor, and during the seven days of its life showed no untoward symptoms except a slightly labored breathing. On the seventh day it was noticed to be growing pale, and vomited a small amount of blood. This was followed at short intervals by two tarry stools, the child passing into collapse. Tannic acid internally and ice externally to abdomen had no apparent effect, and death ensued twelve hours after the first symptoms were noted. No family history of hemophilia could be elicited.—*The Lancet.*

Lactic Acid in Diarrhea.—N. V. Lojkin draws attention to the great value of this medicine in chronic dysentery and acute dyspepsia. He reports a case in which several drugs had failed to cure chronic dysentery, but which was entirely cured in nine days by administering half a tumblerful of a two per cent. solution of lactic acid twice daily. The blood disappeared from the stools in a day or two. Another case, one of acute dyspepsia, he reports being cured in twenty-four hours, only two doses having been given.—*American Therapist.*

Cases of membranous enteritis are not very frequent even in the adult. Most of the children and adults who suffer from membranous enteritis are neurotic.

In acute intestinal catarrh give no raw milk, no boiled milk, no admixture at all in bad cases. In vomiting and severe diarrhea total abstinence for from one to six hours, afterward teaspoon doses of a mucilaginous or farinaceous decoction.—*A. Jacobi, M. D., in Intestinal Diseases of Children.*

Fruits in Chronic Constipation.—Dr. Vasily N. Vasilieff, of St. Petersburg, emphatically states (St. Petersburg Inaugural Dissertation) that according to his experience the treatment of habitual constipation by gooseberries, currants, or plums ingested daily in large quantities is followed by better results than the administration of any medicaments yet known. The proposition especially holds true with regard to patients belonging to the poorer classes of the community.

Ileo-Colic Intussusception with very Low Temperature.—The patient was a male infant aged five months. He died four days after the onset of the sickness, and the *post-mortem* showed an ileo-cecal intussusception three inches in length. The temperature in the rectum did not at any time rise above 99° F., on the second and third day it was 96.5° F., and on the last day of the illness it was 96° F.—*J. Duncan Caddy, The Lancet.*

Book Reviews.

An American Text-Book of Surgery for Practitioners and Students. By Charles H. Burnett, M. D., Phineas S. Conner, M. D., Frederick S. Dennis, M. D., William W. Keen, M. D., Charles B. Nancrede, M. D., Roswell Park, M. D., Lewis S. Pilcher, M. D., Nicholas Senn, M. D., Francis J. Shepherd, M. D., Lewis A. Stimson, M. D., William Thompson, M. D., J. Collins Warren, M. D., and J. William White, M. D. Edited by William W. Keen, M. D., LL. D., and J. William White, M. D., Ph. D. Profusely illustrated. Philadelphia: W. B. Saunders. 1893.

We welcome this complete work. Edited as it is by such well-known American surgeons, assisted in its collaboration by such an array of American talent, it is strictly an American text-book.

The work is handsomely gotten up, contains over twelve hundred pages, and the illustrations, "very many of which are original, among them the bacteriological colored plates, and the numerous half-tone plates, which are reproduced with great fidelity from photographs of patients or of specimens," add greatly to the value of the book.

It begins with a chapter on surgical bacteriology, which is ably treated and beautifully illustrated. A text-book would not be a text-book without full notice of this important work, and the American Text-Book is the only one extant which is fully up to date in this regard.

In regard to bactericidal drugs, bichloride of mercury heads the list; aqueous solutions of carbolic acid are next mentioned in value. The germicidal power of acid boracic and acid salicylic is regarded as *nil;* of iodoform, "it markedly retards the growth of bacteria, but does not procure asepsis of material, instruments, or wounds."

Gangrene is well described in a special chapter and admirably illustrated by a colored plate.

Tuberculin or *paratoloid* is mentioned in the treatment of tuberculosis.

In regard to the treatment of *hydrophobia,* the authors state that "in view of the results of treatment of this malady by Pas-

teur, and in view of the great danger of the possible development of hydrophobic symptoms in a person bitten by an animal suffering from rabies, and the utter hopelessness attending the progress of such an attack, it would be the part of wisdom in all cases of bites from presumably rabid animals to subject such patients to the Pasteur treatment if possible." It is the opinion of the reviewer that much credit has been given this treatment for *cures*, when the patient would never have had hydrophobia because bitten by an animal *presumably* rabid, but owing to the premature killing of the animal this fact could not be definitely determined, and under the uncertainty this treatment is instituted and a *cure* is reported.

In the chapter on *syphilis*, argument is made against the primary administration of mercury before a positive diagnosis can be made, which it is stated is never possible absolutely from the initial lesion. Excision, cauterization, antiseptic measures, and various local applications as abortive measures are decried. A reinfection of a syphilitic is declared possible. As regards modes of infection, the mother previously uninfected may become infected through the medium of the child, which receives its syphilis directly from the father. As an explanation of Colles' law it is stated that "the mothers who have thus acquired immunity have done so by first acquiring the disease through pregnancy." Examination has shown that the "semen of a syphilitic man is entirely non-inoculable."

The chapter on tumors is in keeping with other parts of this most excellent work. The author has used the limited space at his command to the best advantage, and has given a modern, accurate, and reasonably comprehensive view of the subject. I know of no chapter on tumors which will commend itself so much to the student and busy practitioner. It is indeed a *multum in parvo*.

The teacher and essayist may put the book aside with some little disappointment on account of the fact that each neoplasm has not been as extensively dealt with as the writer is evidently capable of doing. What he has done, however, has been so well done that we wish he had given thrice as much space to this important subject. This is the highest compliment we can pay the author. A few plates showing the microscopical appearance

of different neoplasms would add much to this chapter. Benign growths and cysts are handled in a thoroughly satisfactory way.

Sarcomata are well classified and made easy of understanding, which is more than many other recent authors have accomplished. He very properly insists that sarcoma of the testicle and lymphatic glands are even more readily followed by enlargement of the neighboring lymph glands than carcinoma of these organs, a fact not always appreciated.

The author very properly places melanotic disease with the sarcomas, and as justly insists that many cases of so-called encephaloid carcinomas are in reality sarcomas.

The treatment of cancer is satisfactory as far as it goes. The views here expressed are entirely in accord with the most advanced pathology. He does not commit the error of describing cancers of bone, lymphatic glands, and other tissues normally devoid of epithelium.

Carcinoma is essentially an epithelial growth, and can only spring primarily from epi- and hypo-blastic tissues. The author leaves the more speculative field of its etiology practically untouched. A reference to the somewhat popular germ theory of the disease is conspicuous by its absence, no mention being made of Ruffer's "parasitic protozoa," etc. We are gratified to see that his views on the subject of treatment are not to be misunderstood. He advises early and radical operation, and would have the general profession show more faith in the curability of malignant disease. Unquestionably he is right. He shows, we think, too much confidence in curettement and too little in the action of caustics. Again we would commend this chapter on tumors as perhaps the best we know of for the general practitioner and student, for whom it was evidently written.

The chapters on *Fractures* and *Dislocations* are interesting, well illustrated, the classifications good and well adapted to students' use.

Dengue, though not a surgical disease, is mentioned, its symptoms, prognosis, and treatment.

In the chapter on diseases and *injuries of the head*, the topography of the brain in its surgical relations and cerebral localization is treated of.

The credit for the perfection of the technique of cerebral operation is given Mr. Horsley, but no mention is made of the use of the mallet and chisel, by means of which much more delicate work can often be done than by the rongeur forceps alone.

It is surprising that two such distinct and important subjects as *Cephalhematoma* and *Caput Succedaneum* should be described as one and the same condition. Eminent authorities in pediatrics, as Hennig and Hofmokle, place the occurrence of *cephalhematomata* as once in every two hundred births (the reviewer saw four cases in two hundred and two births), while a caput is noted to a greater or less degree in practically every case. In brief, the recognized pathological difference of two conditions is that a cephalhematoma is an extravasation of blood subperiosteally, the tumor being sharply defined to the bone over which it is found, while a caput is a cellular infiltration principally of serum, with perhaps some minute hemorrhages. It does not fluctuate, disappears in a day or two, and is not limited to an area of one bone.

In surgery of the respiratory organs intubation occupies three pages. A poor selection is made of the cuts, the one of the gag depicted being the original style, O'Dwyer having since made a much more complete one.

The chapters devoted to special surgery are concise and well written. No elaborate style is indulged in, for the reason evidently that special works on all such subjects have been issued.

The chapter devoted to diseases of the rectum deals very little with the etiology of disease, or with the pathological changes that are manifest, but make it suffice to deal with the practical points, such as diagnosis, treatment, etc. For instance, one would have to look further than this most excellent book to be enabled to diagnosticate syphilis of the rectum. In dealing with cancer of the rectum it is a pleasant revelation to the reader to see that so eminent an authority makes colotomy a secondary consideration to the extirpation of the growth.

In surgery of the ear no mention is made of the removal of the membrana tympani and ossicles for the relief of deafness from suppurative and non-suppurative middle ear trouble.

There can be no question that this is one of the greatest works on surgery that has ever been issued either in this country

or in Europe. To the American it should be a source of pride that it can no longer be said that we are behind the European authors in any single particular. This book demonstrates that we are not. To the general practitioner it is invaluable, to the student a perfect text-book, to the surgeon or specialist a great book of reference. It deserves the great patronage that it is receiving.

The Principles and Practice of Surgery. By JOHN ASHHURST, JR., M. D. Sixth edition. 1893. Lea Brothers & Co., Philadelphia.

This is not a new work, but the sixth edition of a well-known and highly estimated book on surgery. Indeed it has been recognized as a standard for many years. The field of surgery to-day is so panoramic that frequent editions are necessary even if they are not "exhausted." Views that are regarded as facts to-day may be overturned to-morrow.

After dealing with Inflammation in the first two chapters, the third is devoted to Surgical Bacteriology, General Morphology, and Physiology. This chapter is written by Charles B. Nancrede, a very familiar name in surgery. It is to be regretted that so good a book should deride in the least the *accepted* antiseptic doctrine of to-day, but one looks in vain for a sentence of full indorsement of the principles as are indorsed by such authorities as Senn, Gerster, Wyeth, and others. The preparation necessary to do a strict aseptic or antiseptic operation is neglected in detail and dealt with only in a general way.

Taken all in all it is a splendid work, well written, and meets the demand as a text-book or a work of reference for the general practitioner. The publishers deserve great credit for the handsome style in which the book is gotten up.

The Physician's Leisure Library. 1887. George S. Davis. Detroit.

The valuable little work on Intestinal Diseases of Children, by so eminent an authority as Dr. Jacobi, needs no comment. The work "treats first of the physiology of the digestion of childhood and the main points of its hygiene, as their lessons render the morbid changes more intelligible."

The importance of the digestive troubles of infancy and childhood, about which much is not generally known, makes this work a valuable one and a necessity in all libraries.

Its author has recently been tendered a high compliment in being solicited to fill the chair of Pediatrics, made vacant by the resignation of Henoch, in Berlin, and we join with the American profession in congratulating him upon this high honor, and upon the fact that he has declined to accept it.

Two of the larger books of the series are devoted to the subject of Practical Intestinal Surgery, written by F. B. Robinson, M. D. The author's name alone is quite sufficient to insure that every thing that the books contain is not only scientifically treated, but is up to date. Perhaps no one in America has done more original experimental work in this line than Prof. Robinson. To the surgeon and gynecologist these two small volumes are indispensable, and the general practitioner will find much in them to interest him.

One of the most interesting volumes of the series is that one devoted to Fissure of the Anus and Fistula in Ano, by Dr. Lewis H. Adler, jr. After giving a description of the trouble, causes, symptoms, etc., the treatment is reached. It is a pity that this admirable little work wastes so much time in discussing the palliative (?) treatment of the disease, especially to speak of the "Brinkerhoff system." An affection so simple in its etiology and pathology, and that can be so quickly and radically cured by divulsion of the sphincters, it seems a great loss of time to talk about applying ointments, when it is a recognized fact that not one case in ten is ever benefited by their use.

The same might be said of the author's palliative (?) treatment of fistula in ano. In very few cases indeed will any such treatment avail any thing.

In dealing with the operation for fistula the following language is used on page 62: "The first step in the operation is to dilate the sphincter muscles . . . until muscular contraction is overcome." This is one of the necessary steps in operating for internal hemorrhoids, but it is difficult to understand why it should be done for fistula in ano. In this latter affection the objective point is the sphincter muscle, and it is often a difficult task to save it in the general wreck. Weakened as it generally is by the ulcerative process of the fistula, or considering that it may have to be divided in the operation, every effort should he made to save or at least not to lessen its function. Then, too,

it must be remembered that divulsion is not necessary, as the division made by the knife accomplishes that step, granting that it was desirable to "take it."

Dr. Adler has written a very interesting treatise on the two subjects, and every physician who desires to be posted on rectal diseases should obtain the series.

The number devoted to Diarrhea and Dysentery is contributed by Dr. A. B. Palmer. It is a classical little work, and should be in the hands of every physician.

Taken as a whole, the Physician's Leisure Library is a great success, and the publisher, George S. Davis, deserves the thanks of the profession.

The Student's Quiz Series: Surgery. A Manual for Students and Practitioners. By BERN B. GALLAUDET, M. D., and CHAS. N. DIXON-JONES, B. S., M. D. Philadelphia: Lea Brothers & Co.

The object of this volume of The Student's Quiz Series is said by Dr. Gallaudet to be "to explain" the Principles and Practice of Surgery. The author has succeeded most admirably in his purpose. The book is more than a compend, and to the student especially it will be found of the greatest service. In this day of modern surgery it is especially necessary that works on this branch must be explicit and concise. This little book has both qualities strongly marked. The subjects are discussed in a plain, practical way in the form of questions and answers. Much more can be gained by the student by a thorough mastery of these than by reading an elaborate work on surgery. Bacteriology is a leading feature, as it must needs be in every correct work dealing with surgical principles.

To the practitioner, who has not the time or disposition to wade through a larger work, this book will meet his demand. No one will be disappointed in its reading.

Books and Pamphlets Received.

A Contribution to the Study of Some of the Diseases Peculiar to the Right Iliac Fossa, with Reference to their Relief by Surgical Interference. By R. Harvey Reed, M. D., Mansfield, Ohio. Reprinted from the American Gynecological Journal.

Syllabus of Lectures on the Practice of Surgery. Arranged in conformity with the American Text-book of Surgery. By N. Senn, M. D., Ph. D., LL. D., Chicago. Philadelphia: W. B. Saunders. 1894.

Transactions of the Kentucky State Medical Society. Thirty-eighth Annual Meeting, held at Frankfort, May 10, 11, 12, 1893. New Series, Vol. II. Louisville: John P. Morton & Co. 1893.

Comparative Value of Mercury and the Iodides in Treatment of Syphilis. By James T. Jelks, M. D., Hot Springs, Ark. Reprinted from the Journal of the American Medical Association.

The Antiquity of Syphilis, and Moses as a Health Officer. By James T. Jelks, M. D., Hot Springs, Ark. Reprinted from the Journal of the American Medical Association.

Recent Observations in Colotomy, with Cases in London. By J. Rawson Pennington, M. D., Chicago, Ill. Reprinted from the Journal of the American Medical Association.

Excision of the Rectum. Report of a Case and Demonstration of Specimen. By L. J. Krouse, M. D., Cincinnati, Ohio. Reprinted from the Lancet-Clinic.

Diagnosis and Treatment of Abscess of the Ano-Rectal Region. By Edward Clark, M. D., Buffalo, N. Y. Reprinted from the Medical and Surgical Journal.

Two Cases of Carcinoma of the Uterus. By James T. Jelks, M. D., Hot Springs, Ark. Reprinted from the Journal of the Arkansas State Medical Society.

The Prevention of Venereal Diseases. By James T. Jelks, M. D., Hot Springs, Ark. Reprint from the Journal of the Arkansas Medical Society.

Sanitary Work in India; A Cabinet Health Officer. By J. Drummond Busch, M. D., New York. Reprinted from Gaillard's Medical Journal.

Northwestern Kentucky Medical Association. Proceedings of the Columbian Session, Maysville, Ky. G. M. Phillips, M. D., Secretary.

The Bacillus of Soft Chancre. By William Allan Pusey, A. M., M. D., Chicago. Reprinted from North American Practitioner.

Hemorrhoids and their Treatment. By G. H. Kirwan, M. D., Wilkesbarre, Pa. Reprinted from the Medical and Surgical Reporter.

Causes and Treatment of Rectal Fistulæ. By Charles C. Allison, M. D., Omaha, Neb. Reprinted from Omaha Clinic.

Current Fallacies about Nervous Prostration. By Dr. Ludwig Bremer, St. Louis, Mo. Dixon-Jones Printing Co.

The Leprosy Problem. By William Allan Pusey, A. M., M. D. Reprinted from the Chicago Medical Recorder.

Traumatic Neuroses in Court. Dr. L. Bremer, St. Louis, Mo. Reprinted from St. Louis Medical Review.

The Technique of Gynecological Surgery. By William D. Haggard, jr., M. D., Nashville.

Truax, Green & Co., Chicago. Catalogue Physicians' Supplies. Sixth edition.

Notes and Queries.

American Medical Publishers' Association.—The first annual meeting of this Association was held in the Grand Hotel, Cincinnati, on Monday, December 4, 1893, and steps were taken in the direction of active routine work. The by-laws and rules were revised and amended, while the name was modified in accordance with a demand from medical publishers of a general nature who desired to become members of the Association. The active co-operation of every medical publisher is earnestly solicited. Next meeting in Washington, D. C., September, 1894. Officers: President, Dr. Landon B. Edwards, Richmond, Va.; Vice-President, Dr. J. C. Culbertson, Cincinnati, O.; Treasurer, J. MacDonald, jr., New York City. For application blanks and copies of the Articles of Association, address Charles Wood Fassett, Secretary, corner Sixth and Charles, St. Joseph, Mo.

We desire to state that, upon the receipt of $4, Mathews' Medical Quarterly and *The American Practitioner and News* will be sent to the same address for one year.

This is an exceptional offer, two valuable journals being thus secured at a saving of $1; Mathews' Medical Quarterly being devoted to special subjects and issued quarterly, *The American Practitioner and News* being a bi-weekly journal devoted to general medicine and surgery.

Now is the time to subscribe. Send in your name and subscription at once to the Manager of Mathews' Medical Quarterly, P. O. Box 434, Louisville, Ky.

Dr. J. R. Pennington, late of this city, has removed to Chicago, and will devote his practice exclusively to diseases of the rectum. The doctor has had many advantages in this line and is in every way qualified for this special field. We hope for him abundant success.

NOTICE TO CONTRIBUTORS.

Articles and letters for publication, books and articles for review, and communications to the editors, advertisements, or subscriptions, should be addressed to the EDITORS OF MATHEWS' MEDICAL QUARTERLY, BOX 434, LOUISVILLE, KY.

All necessary illustrations will be furnished free of expense to authors where they send black and white drawings—or negatives—with their MSS.

All articles for publication in the QUARTERLY will be considered only with the distinct understanding that they are contributed to it exclusively.

Alterations in proof-sheets are charged at the rate of 60 cents per hour, which is the printer's rate to the journal.

Reprints may be had at printer's rate if request is made upon proof when it is returned.

All manuscript must be received by the first of the month preceding its publication.

Remittances may be made by check, money order, draft, or registered letter.

The Editors are not responsible for the views of contributors.

We would be under many obligations if the different medical journals would insert the following card:

To the Medical Profession:

The editors of MATHEWS' MEDICAL QUARTERLY desire to obtain the names of all reputable surgeons in the United States who limit their practice to diseases of the rectum.

Address

Editors of MATHEWS' MEDICAL QUARTERLY,
P. O. BOX 434, LOUISVILLE, KY.

CHARLES B. BALL, M. D., F. R. C. S. I.

DUBLIN.

MATHEWS'
MEDICAL QUARTERLY.
"ALIS VOLAT PROPRIIS."
Vol. I. APRIL, 1894. No. 2.

Original Contributions.

THE ANAL VALVES; THEIR ORIGIN AND PATHOGENIC SIGNIFICANCE.

BY CHARLES B. BALL, M. D., OF DUBLIN.

[Written for MATHEWS' MEDICAL QUARTERLY.]

The description usually given of the anus as a ring-like aperture has been pointed out by Ranney (*American Journal of Obstetrics*, 1883, p. 238,) and by Symington (*Journal of Anatomy and Physiology*, 1889, p. 106,) to be incorrect. The latter, in discussing the prevalent idea that the anus is a circular orifice, situated at the level of the muco-cutaneous junction, says: "I believe this view to convey an erroneous conception of the normal condition of parts, and to lead to incorrect ideas as to the physics of the pelvic floor and the mechanism of defecation. The rectum is a receptacle for feces and air, and these may be retained in it for a longer or shorter time, while the anus is a passage between the rectum and the exterior, which is surrounded by certain sphincters, and has its walls in close contact except during defecation. This passage or anal canal is about an inch in length, and its long axis is directed downward and backward at about a right angle with that of the second part of the rectum."

To any one who carefully considers the question it will be obvious that the above observations are entirely correct, and that in the normal state this anal canal is closed except during defecation; during this process the anal canal is opened, and the upper opening of it, corresponding to the muco-cutaneous junction, protruded, giving the pattern to the expelled mass of feces.

This upper opening of the anal canal is marked by a white ridge (Hilton's white line), above which the mucous membrane of the rectum commences. A close examination of any case of prolapsed internal piles will still further prove the truth of this statement.

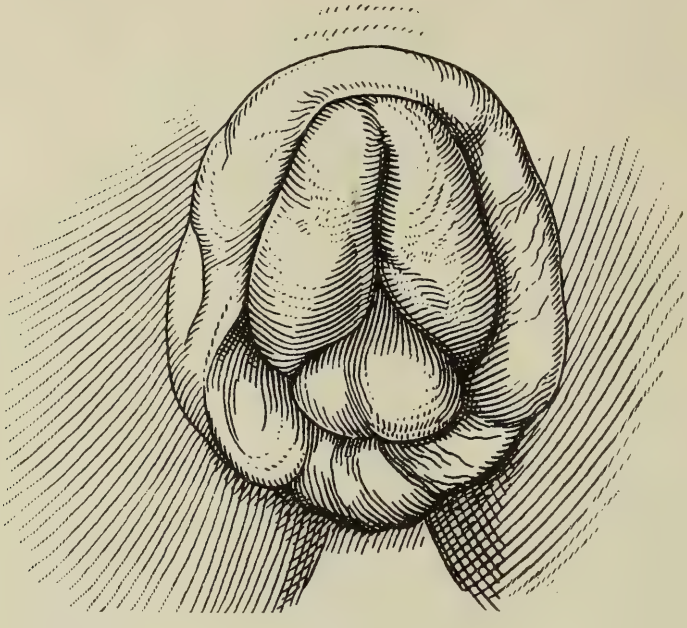

Fig. 1.

In the above illustration of a case of prolapsed piles, the external ring is composed entirely of the revoluted anal canal. It is pale in color, covered by scaly epithelium, and, if the piles are at all inflamed, more or less edematous, while the inner masses are bright red and covered with mucous membrane. If, now, the internal piles are reduced, the anal canal can be observed easily, becoming involuted again, while the anus resumes its normal appearance. A true appreciation of this revolution of the anal canal during the prolapse of piles has, as I have elsewhere shown (The Rectum and Anus, their Diseases and Treatment, 2d edition, 1894, p. 283), a most important bearing on the operative measures for their removal. Immediately above the upper opening the mucous membrane commences. It is here thrown into vertical folds, the columns of Morgagni, while, surrounding the margin of the opening, we meet with the anal valves. These structures were originally described by Morgagni. (*Adversaria Anatomica*, III, *Animadversio*, vi.) He compared them to the

semi-lunar valves of the heart, and he considered that they aided the sphincter in closing the rectum by filling the angles between the columns. He also pointed out that they were irregular both in size and number, while they were occasionally absent. Most of the modern text-books of anatomy contain no reference to them, while a few only allude to their existence, but give no details.

I have made a careful examination of a large number of rectums with special reference to the anal valves. They are present so as to be easily detected in ninety per cent. of normal rectums, and vary in size from having a free margin of one fourth of an inch to such small dimensions that they can scarcely be detected; they are distributed around the anus with the greatest irregularity, and they bear no constant relation to the columns of Morgagni. Outside the valves the mucous membrane is thrown into pouches, which sometimes are so large as to be more correctly described as false diverticula.

The extreme irregularity of these anal valves suggests that they are vestigial remnants of a developmental process, rather than structures of definite functional significance. Such, I feel sure, is the true explanation of their existence. During the embryological development of the intestine the mucous membrane is developed from the endoblast, and in early fetal life is a closed cavity called the mesenteron. This is met and opened into by a process called the proctodeum, which commences as a depression in the epiblast, and I believe eventually forms the anal canal. The mesenteron and proctodeum come to be separated from one another only by a membrane called the anal plate, which eventually disappears, thus establishing the continuity of the two channels. The failure of the absorption of the anal plate causes one of the commonest forms of imperforate anus, while I think it may with tolerable confidence be asserted that the anal valves are the vestigial remains of the anal plate, the rest of which has disappeared in the process of development. That the anal valves have a large share in the pathogeny of painful fissure I will endeavor to prove.

Many authors have noted that painful fissures apparently commenced in the rectal sinuses, and also that at the lower portion of it there was what is called a small external pile, and have stated

that for the cure to be complete this pile must be removed in addition to the usual operation for the cure of the fissure. These authors consider that the first cause is a longitudinal split from overdistension during the passage of a hard motion, or an abrasion from some particularly hard fragment of feces, and that the presence of a pile or little cutaneous tag at its lower portion is only an accidental complication. I believe, in a large number of cases, what happens is as follows: During the passage of a motion one of these little valves is caught by some projection in the fecal mass and its lateral attachments torn; at each subsequent motion the little sore thus made is reopened and possibly extended; the repeated interference with the attempts at healing, ends in the production of an ulcer, and the torn-down valve becomes swollen and edematous, constituting the so-called pile, or, as it sometimes has been called, the "sentinel" pile of the fissure. Most of us have experienced the little bits of skin torn down at the sides of the finger-nails popularly called "torments," and how painful they are when dragged upon. Now the torn-down anal valve resembles closely this condition of the finger, except that in the former it is situated at the acutely sensitive anal margin, and subjected to the periodic strain of a passing motion; it is therefore not to be wondered at that the pain should be so excessive as to seriously affect the general health and render life miserable.

Figure 2 (taken from a drawing kindly made for me by my resident pupil, Mr. Kennan, from a specimen accidentally found in the hospital *post-mortem* room) well indicates the points to which I desire to call attention. The rectum and anus were removed from the body and opened by a vertical anterior incision. Where the contracted anal canal joins the rectum the white line described by Hilton is to be seen, and at this level four of the anal valves (A), with the pouches behind them, are distinctly observable. In this specimen they are much more pronounced than usual, so that it can be readily understood how liable they are to be caught and torn during defecation. At (C) is to be seen the "sentinel pile," and at (B) the fissure which had cicatrized. This so-called pile is here obviously one of the posterior anal valves which was torn down, and has become thickened and edematous.

Let us see now how it was that the older operations proved so largely successful in the treatment of this disease, admitting the theory I have above enunciated to be correct. First, as to dilatation: When the anus is widely stretched by the fingers,

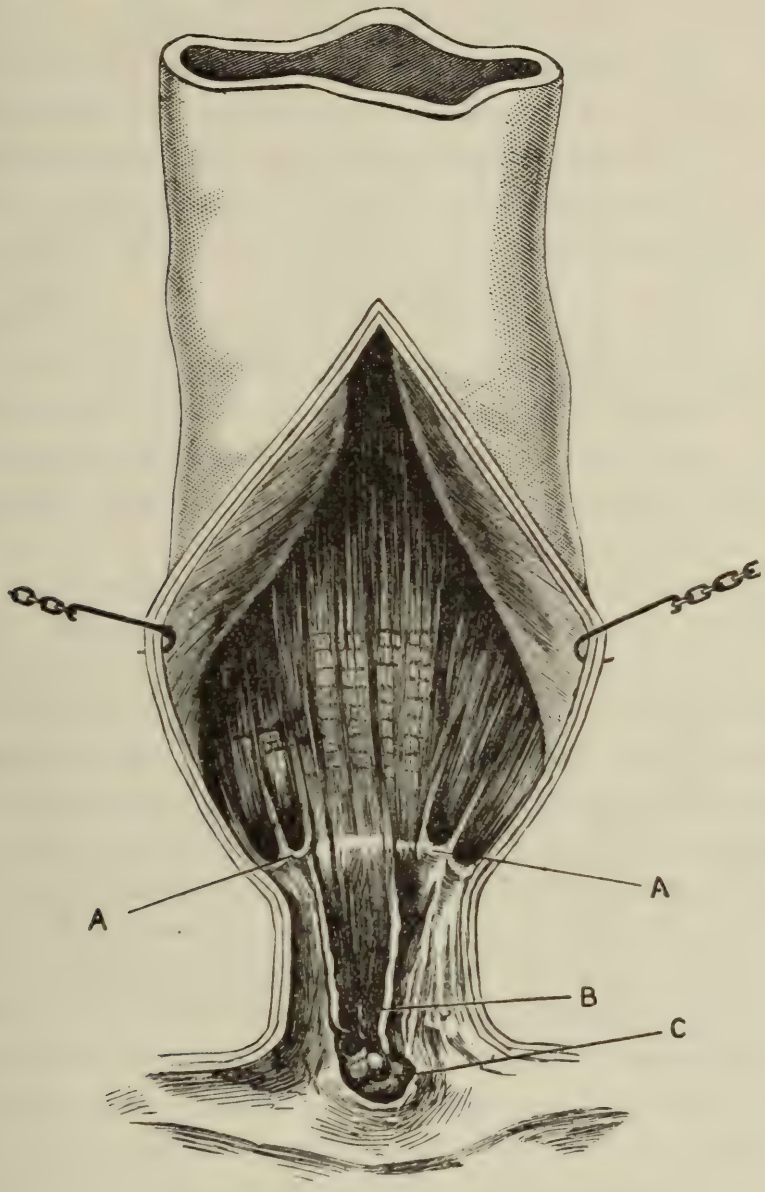

Fig. 2.

beyond the limits of natural dilatation by the passage of a motion, the little valve is torn down beyond the extent to which it is torn in normal defecation, and consequently rest is given to the ulcer and healing ensues, the subsequent defecation not re-opening the sore. In like manner spontaneous cure occasionally

ensues by the valve being torn down to its full extent during repeated acts of defecation; then the fissure heals, and the valve remains a little cutaneous tag, like many external piles; this had obviously occurred in the specimen from which the illustration was taken. In the "torments" at the side of the finger, if the little piece of skin is forcibly torn down, although the process is painful, a cure results just in the same way the forcible dilatation cures the anal ulcer. Secondly, complete or partial division of the sphincter, if carried down through this tag, relaxes each side so that the subsequent motions do not catch in it and reopen the wound. But most surgeons of experience in this subject, have met with cases in which both dilatation and incision of the sphincter have failed, and the advice given by many writers to supplement the operation by the removal of the so-called pile at the lower end of the ulcer is undoubtedly sound. I would, however, go a step further, and say that the removal of this little tag is all that is necessary, and that either the forcible dilatation or incision of the sphincter is uncalled for.

What I would recommend in these cases, where the classic symptoms of painful fissure are present, is as follows: Do not subject the patient to the pain of extended digital examination, much less occasion him the torture of passing a speculum; but, after having the bowels fully relieved by an efficient aperient, administer an anesthetic, and dilate the anus with the fingers sufficiently to obtain a good view of the entire circumference of the muco-cutaneous junction; then, if the symptoms have been characteristic, a little ulcer will almost certainly be found, and at its lower extremity the torn-down anal valve sometimes greatly hypertrophied. All that is now necessary is to catch this in a pair of forceps, and with a fine pair of scissors remove it by a V-shaped incision, with base toward the ulcer, so that nothing be left which can be caught by a passing fecal mass. If there is any unhealthy granulation tissue in the ulcer this should be removed with the sharp spoon, and the surface well dusted with boracic acid; the cure will then be as immediate and certain as when the little "torment" at the side of the finger-nail is shaved off level with the skin. It is advisable after this little operation to examine carefully all the other anal valves, and, if any of them are likely from their size and projection to be torn down and so form other fissures, to snip them off with the scissors.

The first case which directed my attention to the theory above detailed occurred five years ago. An otherwise healthy young woman consulted me, complaining of very severe pain after the bowels moved. So great was the pain that she postponed defecation for several days, with the result that she was quite incapacitated for attending to her duties for several hours after the bowels moved. She was in no way a neurotic subject, and I am convinced that her suffering was extremely acute. Upon superficial examination nothing was to be seen, but the left side of the anus was extremely tender to the touch, and any attempt to introduce the finger was attended with such pain and spasm that I did not persist in it, but prescribed an aperient, and the following day dilated the anus under ether, when a small ulcer rather triangular in shape was clearly seen; the base of the triangle was below, and was formed of an edematous little tag of cutaneous tissue, which I recognized as an anal valve. Catching this in a forceps and drawing it down tended to enlarge the ulcer, and the resemblance of this to the "torments" on the finger at once suggested itself. The treatment adopted was that which I have already indicated, and the cure was immediate and absolute.

Since then I have had thirty-five cases under treatment; in all the piece torn down by defecation was found, although in some it was small. In two of the cases, in addition to the treatment above detailed, I slightly incised the sphincter, as it was very rigid and contracted. This I did in deference to old tradition, and I now believe it was inflicting a useless, although trivial, injury on the patient. One of these cases had been twice operated on by other surgeons, once by incision, and once, I am informed, by the truly barbarous method of Maisonneuve, namely, gradually introducing the whole hand into the rectum, closing the fist, and then forcibly withdrawing it. What this heroic treatment failed to accomplish, the little operation of snipping away the torn-down anal valve surely effected. In another case, which had also been operated on before by incision, the bifid remains of the anal valve still caused an obstruction to the passing feces, and so kept up the sore.

In conclusion, I would wish to point out that the cases to which my communication relates are the painful or intolerable

fissures of the anus; they are not to be confounded with the superficial cracks of the anal skin, common in eczema and some other conditions, nor with the superficial ulcers met with in syphilis; and they must also be distinguished from tolerable ulcers, occurring wholly on the mucous membrane, which are frequently situated in the rectal sinuses, but which do not produce the characteristic symptoms.

THE CARE OF PATIENTS FOR SURGICAL MEASURES IN RECTAL DISEASES.

BY W. O. GREEN, M. D.,

Fellow of the British Gynecological Society; Chief of the Clinic for Diseases of the Rectum, Kentucky School of Medicine; Associate Editor of the New Albany Medical Herald; Consulting Rectologist to the Louisville City Hospital, etc.

[Written for MATHEWS' MEDICAL QUARTERLY.]

The success of surgical procedures can not be measured wholly by the excellence of operative technique. There is, in fact, quite as much dependent upon the judicious selection, careful preparation, and scrupulous attention in the after-treatment as there is in the operation itself, and in a very large proportion of cases the skill of the physician will be more severely tried before and after the operation than at any other time.

It is a matter of observation that, with many surgeons, there is a severe mental strain which brings the attention to its highest state of activity during the performance of an operation. When this measure has been completed a corresponding relaxation is apt to follow, the mind becomes less observant, and frequently, through a feeling of satisfaction, careless of subsequent minor details.

When the attention begins to wane, it matters not whether it is before or after the operation, there is always a chance of failure resulting, or a risk of mischief being done.

No less an authority than Sir James Paget has observed, "Were I to count the number of preventable calamities of surgery that I have known, I should find the majority of them due to the oversight in personal defects in the patients operated on." And "in most instances, after an operation, an entirely new case begins; a case, not of disease, but of injury."

The risks of any surgical measure may therefore be said to commence with the preparation of the patient, and end with the cure of the disease. Failures may likewise be said to owe their origin to the neglect of any detail throughout the entire time of treatment.

There is no department of surgery less tolerant of neglect than that of rectal diseases; and, since a large proportion of failures arise from an improper estimate of this fact, a few remarks upon the care of patients for surgical measures in diseases of the rectum may not prove unworthy of attention.

Wherever possible the surgeon should enjoin rest, or at any rate a cessation of physical activity for several days previous to the intended day of operation. The term possible, is employed here advisedly. A large proportion of people, probably a majority in private practice, do not seem to realize sufficiently the importance of such a course, and will either consult their own feelings or else adhere only partially to the means advised by the surgeon. In hospitals, where the laws of the physician can be almost arbitrary when necessity requires, the patient can have little choice in this matter, and must, in consequence, fare all the better under intelligent care. Therefore it is well to see that the patient is made to understand the interest he has in keeping quiet, and the dangers that may result from the indiscretion of activity.

In almost all cases a cathartic should be given, on retiring, the second night before the intended day of operation. In a general way castor oil should have preference, and it is best given in half- to one-ounce doses. When it is refused, a pill of calomel, powdered rhubarb, and compound extract of colocynth will make a very good substitute, and if the bowel is especially indolent this pill will probably be more serviceable than the oil. On the following morning a saline should be administered an hour before breakfast to thoroughly clear the bowel of its contents. After breakfast the rectum, sigmoid flexure, and lower colon should be freely flushed with an injection of warm water, to which has been added a small amount of carbolic acid, *i. e.*, about one half of one per cent.

If the actions have not been sufficiently moved by the cathartic, or take the form of hard and irritating lumps, a small quantity of warm olive oil and sulphate of magnesia can be effectively

mixed with the enema. However, the sulphate of magnesia may be omitted when from any cause the rectum is exceedingly sensitive or the walls of the colon are thin or friable. In the evening another injection and a second dose of the cathartic should be administered. Just before retiring the patient should take a hot bath, and wash the anal region carefully with soap and water. If a celiotomy or sacral excision is to be performed, the parts about the site of incision should be shaved and washed thoroughly with soap and water, solutions of permanganate of potash and oxalic acid, and covered with towels wrung out with carbolized water.

On the morning of the operation, while fasting, the patient should take another saline, which is followed by a free irrigation of the colon about an hour before the arrival of the surgeon. It should be the duty of the nurse to see that none of the fluid of the injection remains in the bowel, and that the patient takes nothing for the morning meal which is likely to be vomited during the administration of the anesthetic.

The diet must demand attention during the time of preparation. We find it too frequently happens that a man will not only work hard up to the day preceding the operation but conclude the preliminary treatment with a good dinner, on the plea that it will be some time before he will have another such repast. It seems hardly necessary to say that such a person will not be a promising subject for surgical measures. The diet should therefore consist of nutritious, bland, and easily digested food. That is to say, such substances as will increase the vital powers at little expense to the digestive organs, and at the same time leave a small residue to be carried out by purgation. This does not restrict one to liquid foods, but rather to albuminous substances that are carefully prepared, free from condiment, and of a concentrated nature.

There is a class of patients, however, upon whom it will be necessary to pursue a special line of preliminary treatment. These are people who habitually indulge in excessive amounts of spirituous liquors. When these cases present themselves for surgical measures they may be classed among the most unpromising subjects the surgeon has to deal with. For the most part the degree of organic affection resulting from the alcohol will furnish a very good index to the probable result of an operation. It would

be hard to state just exactly where the line should be drawn, but unquestionably many of the milder cases of alcoholism, when judiciously prepared, pass a short convalescence and reach recovery without a single complication. The treatment to be advised should commence four weeks in advance of the operation, and during this time abstinence from all alcoholic drinks should be required. If abstinence is not practicable, nothing beyond two or three glasses, daily, of light wine with Seltzer or Vichy should be permitted. The patient must be kept on a course of blue pill and Carlsbad salts, in addition to which may be given muriate of ammonia and daily massage, with wet pads and cold douches over the liver. In spite of the unfavorable prognosis given in these cases it can be confidently asserted that such a line of preliminary treatment will often effect most satisfactory results upon the subsequent progress of the case.

In anemic patients the treatment should be milder, for in their weakened state brisk purgation will often deplete them to such an extent as to make an operation very hazardous. Under the circumstances mild aperients and injections, as before mentioned, or injections alone will often be sufficient.

The old, like the anemic and "alcoholics," will demand especial preliminary attention. Their chance for recovery is not so much dependent upon their age as the condition of health at the time of treatment. Statistics prove, I think, very conclusively that these patients bear surgical measures quite well, if due care is taken to properly select and prepare them. Most of them will need a good tonic, with plenty concentrated, nutritious, and easily digested food to strengthen their diminished vitality, and particularly should they be kept quiet, and not depleted by excessive purgation.

By way of digression it may be added that wherever possible a local anesthetic should be employed instead of using an agent which will produce a constitutional effect. Old people do not, as a rule, bear chloroform or ether well; besides they seem less sensitive to pain than younger subjects, which conditions have material weight in favoring the employment of local anesthetics.

In all cases, however, before the patient is brought into the operating-room the bladder should be emptied. The clothing should consist of a warm undershirt, a night-gown, and stock-

ings, the weight of which must conform to the temperature of the room, while a change is kept in readiness to replace the soiled garments if it becomes necessary. This clothing can be supplemented by a blanket or sheet when the patient is placed upon the operating-table.

Whenever possible the patient should be anesthetized outside the operating-room; and should such a course prove impracticable, the paraphernalia of the surgeon must be concealed until the patient is fairly under the influence of the anesthetic; and before anesthesia is complete all unnecessary noise and clicking of instruments ought to be avoided.

This rule should be especially cared for in the nervous, timid, and those who are submitting to surgical measures for the first time. I feel sure that there are few things more formidable, even to the bravest, than to be suddenly thrust into a room for operation, where there are strewn about glittering instruments, tables, irrigators, surgical dressings, and the like, in the midst of which is the surgeon, with his coat off, sleeves rolled up, and his face bearing a serious expression. It is quite certain that the dread of such an experience often stays the hand of the surgeon in many cases until too late for scientific skill to be of any avail, and I have known patients to decline operations outright when admitted to such depressing surroundings. In fact, the psychical effect of any and all things that pertain to surgery can not be too highly estimated, and it is not asserting too much to state that many failures and prolonged convalescences can be attributed to an improper regard for such conditions.

It is not wise for the surgeon to attempt an operation of any gravity upon the rectum unless he has two efficient assistants, one to render him manual help, and another, a doctor of experience, to administer the anesthetic. However, when circumstances demand, he can sometimes make out with his chloroformist alone, and it may happen that an inexperienced hand can be of service to him. But upon the score of safety such conditions are rather to be deprecated, and should only grow out of emergencies or necessities. The greatest danger lies in the difficulty of controlling hemorrhage, which is often hard enough to manage under the most favorable surroundings. Three or four assistants are preferable, and each should have a place assigned to him.

Besides the one giving ether, there should be an assistant of experience, who understands the nature of the operation, to sponge or help in the technique of the work. If the patient is placed on the side, an assistant of some strength should be present to control the bodily movements and keep the buttocks well separated. If the dorsal position is employed, there must be two assistants, one on either side to hold the legs in place and steady the speculum, should one be employed. However, where the surgeon is provided with one, a Clover's crutch will maintain this position nicely. Five assistants can often find employment in these cases; and, should the surgeon be so favored as to have an extra one, looking after the sponges, antiseptic fluids, and instruments, will be time well spent and of material benefit to the operator.

The positions of the patient for the various operations are five in number, and they may be varied according to the character of the operation and fancy of the surgeon. Already two have been alluded to, which are the lateral or Sims, and the dorsal or lithotomy positions. The other three may be mentioned as the lateral position for the exposure of the sacral region in sacral excision, a dorsal position for anterior colotomy, and a lateral position for lumbar colotomy. However, for nine tenths of the cases the first two will be sufficient, and, when there is a doubt as to choice, for obvious reasons preference should be given the Sims position.

Of the lithotomy and Sims positions it need only be said that they vary in no respect in rectal surgery from that for which they were intended. In the lateral position for sacral excision the hips are elevated by means of a pad, and the sacral region brought close to the edge of the table instead of the perineum, as in the Sims position. The dorsal position for colotomy differs in no respect from that ordinarily employed in abdominal section, the patient lying on the back with the lower limbs fully extended. In the position for lumbar colotomy, or colotomy in the loin, "the patient should lie upon the sound side and close to the edge of the table. A small, hard pillow, or sand-bag is placed under the opposite loin, so that the region to be operated on may be brought well into view." Where there is much distension of the bowel, or the patient is very corpulent, the pillow need not be used. Several large sponges should be placed between the pillow

and the loin to absorb the fluids of irrigation and catch the discharges from the wound.

In regarding the time for an operation the surgeon should select by preference the morning, about two hours after an early breakfast. The patient then, presumably, has been refreshened by a night's rest, and has fasted long enough to have digested the meals of the previous day. The remaining *débris* of the alimentary tract has by this time passed into the colon, where the last stage of digestion has been completed, and is ready for evacuation—this, of course, presumes upon the effects of purgation. The bowel is therefore easily relieved of its entire contents, and is left in the best condition for operation and subsequent confinement. Another advantage in this connection is that the patient will lose no meals, or probably only one, and recovers sufficiently from the shock, anesthetic, and pain to obtain a fair night's rest.

The antiseptic fluids generally employed are 1 to 40 carbolic-acid solution for the hands, sponges, and instruments, and a large irrigator of perchloride of mercury, in the proportion of 1 to 4,000, for the purpose of irrigating the parts before and after the operation. It will seldom become necessary to use the latter solution during the course of the operation. Where the abdominal cavity is opened it is better, under all circumstances, to dispense with the medicated fluids after the cutaneous incision has been made. Since asepsis rather than antisepsis should be the plan of dealing with this class of cases, boiled filtered water should always be employed.

The bed for these patients is best prepared with a hard mattress, and the rule governing the amount of top covering is, that it must be sufficient to keep the patient comfortable. There should be placed under the hips a rubber cloth or water-proof canvas a yard square, over which is spread a large clean towel. This serves to catch the discharges, protect the bed, and by changing the towel frequently ample cleanliness can be nicely maintained. In some cases of colotomy, proctotomy, or excision, where there is a constant discharge from the parts, the rubber cloth, with a tube leading through the mattress into a receptacle underneath, being the same as that used in hip-joint cases, can be employed to the greatest advantage. Kidney-shaped trays and bed-pans should be kept on hand for these cases, in order that their needs may receive

the proper attention without disturbing the recumbent posture of the patient.

It would be a difficult matter to formulate general rules for the after-treatment of surgical cases in rectal diseases, for they often differ so much as to require distinctive lines of application. There are, however, a few points in common with almost all cases, and these will be commented upon briefly.

The diet, as a matter of fact, should be easily digested, and for the most part fluid during the first few days. A very good *menu* can be chosen from milk, beef teas, juices and extracts, soft-boiled eggs, clam juice, custard, various gruels and broths, kumyss, *café au lait*, boiled fish, tea and milk-toast. The object to be borne in mind is that the bowel should not be overtaxed by digestive action, and kept as free as possible from accumulation of *débris* during confinement. Alcoholic liquors must be interdicted, unless there is a constitutional indication for their use.

In almost all cases for the first week the patient should be strictly confined to bed. After that time, if there has been a satisfactory progression, the patient may be permitted to change to a sofa-lounge for a few hours each day. Not, however, until the wounded surfaces are fairly healed, should the erect posture be maintained for any great length of time, since the consequent congestion of the parts interferes materially with rapid and perfect repair.

For the control of pain generally, it will become necessary to employ opium, either by the mouth or hypodermically. This agent will answer the twofold purpose of relieving pain and confining the bowels. Suppositories have not found much favor, as it oftentimes happens that instead of being absorbed they remain solid and act as an irritating substance to the adjacent wounded tissues. One grain of powdered opium can be administered an hour after the operation, and repeated every three hours, twice, should the pain continue. In case the pain does not pass away, the same dose night and morning for the succeeding day or two will generally suffice. It may happen that the drug is not so acceptable in pill form, when tincture of opium in twenty-drop doses, or hypodermatic injections of morphia, $\frac{1}{4}$ to $\frac{1}{2}$ grain doses, can be effectively substituted. Should the bowel show a tendency to move, and no pain exist, or for any reason opium is contra-

indicated, much good can be derived from the exhibition of such astringents as bismuth, gallic acid, quassia, and tannic acid. The local application of heat is often serviceable, and can be employed either with or without the administration of opium.

Retention of urine is a very common result of operative procedures about the rectum. It is perhaps more frequently seen in the male, but should always be looked for in both sexes. This complication is sometimes very persistent, and not infrequently remains for a week or more, during which time artificial aids for emptying the bladder will become necessary. It should always be relieved, if possible, without the assistance of the catheter, and to this end hot cloths applied over the lower part of the abdomen will often do excellent service. This, however, may fail, and then male patients can rest on their hands and knees in bed with the hot cloths applied over the bladder, and frequently obtain satisfactory relief. Sitz baths can sometimes be tried, but there is a certain amount of risk attending them which should make the surgeon cautious in recommending their prolonged or frequent use. The retention may be brought about by the tight application of a bandage, in which instance loosening it will accomplish the desired result. Should other means fail, the catheter can be employed, but always as a last resort. The soft rubber instrument is perhaps best adapted to the male, while in the female nothing answers the purpose better than the multiple fenestrated glass catheter. The instruments should always be carefully washed before and after use, and constantly kept in a carbolized solution, and in the female the external parts must be washed with a mild antiseptic fluid previous to catheterization.

It is always well to keep, in a tabulated form, the temperature, pulse, and respiration, for the first few days, at any rate, until the normal point is about reached, and later to examine them occasionally to make sure of the patient's well-being.

Throughout the whole range of rectal surgery there is nothing that places such grave responsibility upon the shoulders of the surgeon as the management of hemorrhage. But, fortunately, it is an accident that does not often occur where the operator is duly careful, and should it take place there are always means that will effectually control it, provided they are promptly and judiciously followed. For this purpose the physician should

always be provided with plenty of absorbent cotton, a bell-shaped sponge, a plaited catheter or small rubber tube, a long, stout ligature, and a reliable styptic, such as powdered alum, tannic acid or the subsulphate of iron.

When the operation has been completed, especially if it is one in which several large vessels have been implicated, it is well for the surgeon to remain with his patient for an hour or more afterward. Just before his departure he should examine the outside dressings for bleeding. They may then be found slightly stained, in which case he would apply a little more cotton and draw the bandage more tightly. Sometimes it will happen that the first piece of cotton will be quickly stained, and it will become necessary to increase the pressure. If the nurse will now make firm pressure with her hand against the pad, the hemorrhage may often subside in the course of an hour or two. When this does not prove sufficient, the dressings should at once be removed and large vessels sought for, with the view of tying them. If the bleeding prove to be general oozing, the parts are syringed with cold water; a fresh piece of cotton, dusted over with a powdered styptic, may be applied, a pad placed over the anus, and the pressure resumed.

The mode of treatment just given may prove quite satisfactory, yet when reaction follows the operation and the arterial tension recovers from its depression, a more formidable bleeding may take place. Here, again, it might be well to proceed as in the instance of primary hemorrhage, and often very successful results may be reached. The bleeding, however, may be internal, and the patient will in all probability complain of a disagreeable flatulent distension in the region of the colon, and an intense desire to empty the bowel, which results from the presence of fomenting blood inside the rectum. He should be allowed to evacuate the offending substance, and enjoined not to indulge in prolonged and unnecessary straining. When the matter has been passed the patient is drawn to the edge of the bed and the rectum syringed freely with very cold water. The index finger should then be well anointed, gently passed into the wounded bowel, and a careful search made for the bleeding vessels. It not infrequently follows that no bleeding point can be detected, when the syringing can be continued for a short time, an oblong smooth piece of ice passed into the rectal pouch, and the outside dressing firmly

reapplied. This can often be supplemented, to great advantage, by placing an ice-bag over the sacrum, and slightly elevating the hips upon a small, hard pillow.

If, in the search made for the bleeding point, a vessel is found, ether should at once be administered, the parts carefully exposed, and the vessel secured either with a ligature or a hemostatic clip left *in situ*.

But there are to be found conditions in which the hemorrhage will continue in spite of the most rigid adherence to the treatment described above. In these cases there may be an excessive amount of oozing, or, not unlikely, the tissues are so soft as not to retain a ligature or hemostatic clip. These will demand yet another method of procedure, which is as simple as it is effective, and consists of what is known as plugging or packing the rectum.

To pack the rectum the surgeon must first procure a soft, perfect, conical-shaped sponge. With a pair of scissors this is trimmed evenly around the edge of its base, and the under surface cut out in such a manner as to give it the effect of a half-filled bell. When dry it should be about two thirds as large as an ordinary sized fist of a man. Through the center of the sponge, on its under surface, a small piece of rubber tubing should be thrust, until it protrudes a little beyond the apex, and is made secure by a ligature wrapped firmly around and stitched at the apex. A heavy ligature or twine string is now passed through the under surface of the sponge near the insertion of the tube, carried out near the apex, around which point it is tied, and returned through the sponge to the under surface on the opposite side of its introduction. The sponge should then be wrung out with warm water and liberally dusted with one of the styptics previously mentioned.

With the index finger in the anus as a guide, the sponge is passed into the pouch of the rectum for three or four inches, using a long penholder or swab-handle for the purpose. The rectum below must then be systematically packed all around with styptic cotton, while care is taken to keep the ligatures and tube outside. This is the most important point of the procedure, and unless it is properly and completely done the surgeon's attempts will be worse than useless, for the packing may act as a sort of drainage arrangement which will rather favor bleeding

than control it. When the rectum is well filled, the protruding ligatures should be grasped with one hand and firmly drawn out, while the other hand is forcibly pressed against the anus and lower part of the packing. The effect of this will be to spread out the sponge in an umbrella-like fashion, and at the same time give compactness to the cotton.

If the surgeon has been judicious in his work, no bleeding need be feared, and, contrary to what may be expected, while the patient continues the use of an opiate he will suffer little inconvenience from the presence of the plug. This may remain in the rectum from one or two days to as long as fourteen days, the tendency to bleed and the pain of course determining the time.

The rubber tube is used for the purpose of allowing the escape of flatus, blood or the dejecta from the bowel, and will permit quite a free irrigation of the parts above.

Other things, such as the Paquelin cautery, Benton air-bags, and Gowland tubes, have been suggested as substitutes; but the method given above is simple, certain, safe, requires no costly outlay of instruments, and is therefore the most practicable and best for general use.

There is one other kind of hemorrhage following operations upon the rectum, and it is always the most dreaded by the rectologist. This is the secondary form. It is to be expected usually in excessive drinkers and eaters, the old, and those who from any cause have broken-down constitutions. It generally occurs from the fifth to the ninth day, or when the ligatures separate, and is due to ulceration, sloughing or the presence of disintegrating clots that are inadequate to seal the mouths of the exposed vessels.

The patient will ordinarily have an intimation of the condition by a feeling of distension about the rectum, an almost irresistible desire to defecate, and a sensation of a warm stream flowing inside the lower bowel. The evacuation of a reasonable amount of blood will confirm the diagnosis beyond a doubt. It may be remarked that the bleeding in these cases is commonly of venous origin. The treatment should consist of early, prompt, and thorough packing.

The same rules that govern the constitutional treatment of hemorrhage elsewhere are applicable in rectal surgery.

LOUISVILLE, 709 Second Street.

RECTAL ABSCESS.*

BY JOSEPH M. MATHEWS, M. D.

I have chosen as a theme for a short paper to-night a subject which may appear at first glance too insignificant for your consideration, but I am sure that it demands serious thought from a surgical standpoint.

It is for the very reason that too little consideration is given abscesses in a general way, and rectal abscesses in a special way, that I desire to bring the subject before the Society this evening. It has been my misfortune to see one patient die from the effects of a rectal abscess, and several others barely rescued from a fatal result from the same cause. It is the common, too common, observation of the surgeon who sees much rectal practice, that abscesses in this region are treated by the physician in a very unsurgical way. Indeed, it seems to be the common practice to instruct those in charge of such cases to avoid all means looking to an early evacuation of pus, but on the contrary to allow nature to do the work of evacuation. In other words, to poultice the threatening abscess until it bursts. From such advice I have seen more than a score of patients that not only had run the risk of sepsis, but had been made invalids for life. If there is one surgical precept that should be taught in preponderance above another, it is, that pus should be evacuated as soon as discovered. Indeed, I believe that the surgeon is justified often in cutting down upon this inflammatory tumor when he *suspects* pus, but has no positive evidence of its presence. I would rather cut into such a tumor and find no pus than allow an ounce of it to remain in the tissues twenty-four hours. This rule holds good whether the abscess be a cold or hot one, whether it is due to acute conditions or can be traced to a special diathesis, as tubercular, etc. I could not imagine a case better suited to bring discredit upon the physician, or to form a basis for a malpractice suit, than to allow an abscess to burrow for days or weeks, as is often done, around and through the tissues of the rectum. If a patient escapes constitutional infection he runs the risk of such

* Read before the Louisville Clinical Society.

local destruction as will make him an invalid for life. Recognizing, then, the necessity for an early evacuation of rectal abscesses, I have only to call your attention to the manner that is usually practiced in opening them. I believe that you will bear me out in saying that the common practice, even with reputable physicians, is to *puncture* these abscesses. It does seem that men, who would not hesitate to amputate an arm or leg, will not only hesitate about opening abscesses around the rectum, but when they do so the smallest instrument possible is used for the purpose. Many patients have told me that a needle was used by the physician for the purpose; and if a knife was used, it was one with the most delicate blade.

In this connection you will permit me to refer to a few cases that I have now under observation:

Case 1. A young lady, aged twenty-three, was brought to me several weeks ago from a Southern State, giving the following history: About eighteen months ago she gave symptoms of a rectal abscess. A physician saw her, and so pronounced her trouble. The swelling was great, and the pain nearly unbearable. She begged that the abscess be lanced, but her physician informed her that it was not *ripe*, and that she must wait. Three weeks' time was consumed in this waiting, and at last nature accomplished her work and the abscess *broke*. Of course poulticing was kept up both before the bursting of the abscess and after. After inflammatory action had subsided the doctor proceeded to treat the fistulous condition, which of course resulted. An injection plan was inaugurated, iodine, carbolic acid, etc., being the agents that were thrown or injected into the sinuses every few days. The result of this treatment was that a second abscess resulted, this time in the other buttock. This, too, was allowed to take its *course*. After she recovered from the second abscess she refused further treatment, and came to me. You can very well imagine the condition in which I found her. A young girl, only twenty-three years of age, handsome, prepossessing, and otherwise healthy, crippled beyond measure by this bad and ill-advised treatment. Upon examination I found on one side two external openings, which led into fistulous sinuses, measuring six to eight inches in length, and running in different directions. On the other side I found the buttock entirely riddled with sinuses,

cavities, etc., and communicating with the bowel at great depth. The operation necessary to cure this girl required the most extensive wounds and a three months' stay at the infirmary. The sphincter muscle being the objective point, it required the most careful surgery to preserve it.

CASE. 2. A young man, aged twenty-four, came to me from a distance. Upon examination I found a large, patulous, indolent ulceration around the rectum. The finger could be run into a cavity fully four inches, and under the flaps of skin to a distance of two inches in different directions. He gave the history of a cold abscess, and the condition I saw was plainly tuberculous. I advised an immediate operation, which consisted in the complete removal by knife, scissors, and curette, of all tuberculous tissue.

The recital of these two cases will be sufficient for me to base a few remarks upon in regard to the treatment.

There are two things that should be scrupulously followed by the physician having in charge a patient suffering from rectal abscess, viz., early evacuation of pus and free drainage.

Considering the great percentage of cases of this kind that end in fistula, it is the duty of the surgeon to prevent that calamity, and the time to do it is while treating the abscess, which is always the forerunner of the latter. Considering, too, the local ravages that both abscess and fistula make, it is little less than criminal to allow such to occur when the prevention can be so easily practiced. To the layman or the uneducated doctor it may seem preposterous to propose that a patient suffering from a rectal abscess should be chloroformed and operated on, but to the surgeon of experience or the pathological student it would appear eminently proper. In every case of rectal abscess I would suggest the following plan of treatment:

Just so soon as pus is detected, or the surgeon has good reason to suppose that it is present, the patient should be informed of the necessity of a free lancing of the abscess to avoid sepsis or fistula in ano.

Having administered a purgative, and the parts thoroughly cleansed, the anesthetic should be given, and with a large knife a *free* incision should be made into the structures. This, of course, causes a free evacuation of pus. An irrigator should be

ready with a solution of 1 to 5,000 mercuric solution, and the cavity thoroughly washed with the same. The surgeon's finger should now be introduced into the abscess cavity, and all bridges, loculi, etc., broken down, when a free injection of peroxide of hydrogen should be practiced. A dilator should now be inserted into the rectum and the sphincter muscle freely divulsed. Iodoform gauze should now be introduced well into the cavity, cotton applied, and a T bandage, and the patient put to bed. On the second day these dressings should be removed and the cavity syringed by sol. mercuric or peroxide of hydrogen, and gauze inserted as before. This should be kept up each succeeding day until the cavity has closed and wound healed. No poultices of any kind should be allowed to be applied after the abscess has been opened.

Remarks. It can be definitely asserted that if this course is pursued in cases of rectal abscess, fistula in ano would become one of the most infrequent of rectal affections, whereas, now, it is claimed by some to be the most frequent. It will be noticed that I have suggested the free divulsion of the sphincter muscle while operating for the abscess. This is done in order that the spasm which naturally affects the muscle during the existence of an abscess is done away with. The contracting of the muscle inordinately at this time would prevent good union, when by resting it every thing is made quiescent.

The injunction not to use poultices after lancing can be appreciated by all antiseptic surgeons. If heat is necessary, hot sterilized cloths can be used; however, the tension being relieved by the cut, but little pain is afterward suffered. The old idea was that by poulticing a free discharge of pus was secured, and that pus was so necessary in those days to the healing of wounds.

LOUISVILLE.

A FEW OBSERVATIONS ON THE SPHINCTER ANI.

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[Written for MATHEWS' MEDICAL QUARTERLY.]

The terminal portal of the alimentary canal in man is supported, open and closed, by a somewhat complicated mechanism, in which a voluntary muscular structure, the sphincter ani, plays an important *rôle*.

That this annular, elliptical, muscular structure alone is concerned in protecting the rectal outlet is erroneous; for, to anyone, who has only made a casual observation of the structural arrangement of the anatomy of the parts and their functional properties, it is at once apparent, that it is but one factor, in the act of defecation, or in controlling the fecal contents of the rectum. Yet it fulfills an important purpose, and to a greater degree than any other of its neighboring organs, is concerned in closing the terminus of the rectum.

Were it not that nature had so constructed the descending colon, the rectum and the adjacent parts, the sphincter muscle would be constantly exposed to a great strain in manifold movements of the body and under various circumstances, and fecal incontinence would be frequent. Therefore, we will observe, the more intricate arrangement of the lower tubular segment of the intestinal canal in the human being, who occupies an erect position of the body, than in the quadruped, that moves with this in the horizontal position.

The first impediment offered, to the downward movement of the fecal mass, is the sigmoid flexure. Where this begins, we will observe that the lumen of the bowel diminishes in diameter. It suddenly curves, sharply upward to the right; and, then turns to the left, and dips downward.

It will also be observed, that though the end of the large intestine approximates to a straight position its direction is by no means vertical, but rather at an angle of about thirty degrees with the horizon. After the rectum passes through the peritoneal cavity, it at once comes within the embrace of a powerful muscular structure, the levator ani; and, moreover, now we will observe

that its own inner walls, contribute a mechanical support, or a sort of break-water, which, when fully called into action, is in itself, almost enough to wholly close the lumen of the bowel and will not permit the escape of any thing; except, an occasional drip or wind, when the alvine discharges are of a fluid or gaseous character.

The lower third of the posterior and lateral walls of the rectum is lodged in an atmosphere of elastic and compressible adipose tissue. This mass of tissue, with the prostate, mechanically serves as a double spring, which exert a constant, uniform pressure against the walls of the gut, with such force, as to at once, compress and firmly oppose their mucous surfaces, and thus obliterate the lumen, after an evacuation.

In middle-aged women who have borne many children, this property of the retro-rectal tissue fails, as the now, lax posterior wall of the vagina falls forward and permits the anterior parieties of the rectum to collapse, into the vaginal hollow.

The accessories, then, which afford resistance to fecal escape and thus serve as auxiliaries to the sphincter ani externus and internus, are extrinsic and intrinsic; the former depending on direction, position and force; active and passive; and the latter, on form and position chiefly.

The levator ani is a muscle of great strength, and powerfully serves the dual purpose of first lifting the bowel high up into the ischio-rectal fossa and then actively compressing it. The next external forces in the male are the prostate, anteriorly, and the adipose mass, posterior and laterally. Within the rectum, from above downward, are numerous circular and longitudinal reduplicated folds of the mucous membrane, first clearly and fully described in this relation by Ball, of Dublin. The most powerful accessory of a centric origin, is the so-called internal sphincter, a very thick, circular fold, formed by an aggregation of the smooth muscular fibers of the intestine with an investment of mucous membrane.

That the foregoing are auxiliary aids of considerable importance, we occasionally see demonstrated, clinically, in rectal prolapse of childhood and in those cases of fistula in ano, in which, for treatment, the external sphincter has been completely cut through; besides in those cases in which an inch or more of the

rectum with the external sphincter has been completely swept away by an excision for cancer.

With these, we may occasionally observe, that wind involuntarily escapes; perhaps, with fluid feces during sudden strains of the body. During the act of defecation the anus descends. There are simultaneously a dilatation of the external sphincter and a relaxation with lengthening of the levator ani. Immediately on the completion of the bowel's evacuation it is dragged up high in the recto-ischiatic fossa. The sphincter ani contracts, and completely infolds the prolapsed mucous membrane as far as the cutaneous junction. This corrugation of the mucous membrane produces a series of vertical, velvety plaids, which are maintained in snug apposition, partly, by the inverting action of the sphincter muscle, the contraction of the levator ani, and finally, by atmospheric pressure.

Treves, in his excellent Hand-book of Anatomy (page 412), informs us that the sphincter ani will safely bear considerable dilatation when this is applied gradually; that a moderate sized hand may be readily introduced through it, when its circumference is no more than eight inches; and, that it may be carried as far upward as the sigmoid flexure.

The lower fifth of the rectum is very dilatable, so that when the sphincter is closed the lower end of the rectum presents an outline very much like the closed neck of a well-filled grain sack, inverted. The supra-anal area is of great clinical interest:

1. Because, as it is very highly sensitive, it is most abundantly endowed with a nerve supply from branches of the lumbar plexus and the pubic nerves, and the inferior mesenteric terminus of the sympathetic.

2. Because it is here, just within the anal curtain, that varices of the rectal veins are the most commonly situated.

3. Because it is in this zone, one will most frequently encounter neoplasmata, benign, and malignant.

4. Because it is here degenerative, pathological changes of the mucous, muscular, and cellular elements of the rectum have their origin and linger the longest.

5. Because by an ample knowledge of the normal structures and functions of this segment, with a familiarity with the varied pathological mutations at this site, we are enabled to master

or at least intelligently treat, the vast majority of ano-rectal maladies.

The inferior terminus of the alimentary canal, like its origin, is a musculo-membranous tube, and on first inspection it would seem, that as food must be reduced by trituration, a bolus which can enter it above, should very readily pass through the anus, below. However, when it is considered that the food undergoes complete assimilation, that it is the residue only, and by-products of excretion, of various forms and consistence which are carried to the anus, we can the easier understand, after all, the wide contrast in function, in the portals of entrance and exit.

The colon is the sewer-pipe of the alimentary canal; for, without question, digestion is completed when the intestinal contents have passed the ileo-cecal valve.

In the lower animal, as the rodent, we will observe, that at this point, the intestinal contents, cease to be fluid, and by a special mechanism within the gut, the feces are moulded into round or ovoid masses of a uniform size, and this shape ejected periodically, from the rectum. The colon, then, is but a reservoir for purely excrementitious substances.

If the human being were to conform more to nature's laws, no doubt the shape and consistence of the fecal mass would be more uniform. But he does not; and, in civilized society, can not always. He indulges in excesses of eating and drinking, is irregular in his habits, often takes insufficient exercise, and eats indigestible or improper food.

Therefore the contents of the colon may be of a most acrid, foul, irritating quality. In chronic constipation the feces are hard, lumpy, of an irregular form, and unyielding. As they pass through they may tear or contuse the mucous lining of the anal outlet. Indeed it may be said without fear of contradiction, that the sphincter ani is the most abused muscle in the body, and were it not endowed with a peculiar and unique vitality of its own, it must give way and wholly cease to perform its functions, long before the ordinary span of life is passed.

When a large accumulation of hard, foul feces is lodged in the lower rectal pouch, as this is increased in volume by accretions constantly passing down from above, such steady and prolonged pressure is maintained on the supra-anal walls, as to interfere with the circulation and nutrition of the muscle.

Many particles of bone, the seed of fruit, and other indigestible substances, may readily enter the cardiac orifice of the stomach and slip through the ileo-cecal portal, which, when they reach the anus, now perhaps moulded into hard scybala, only make their way, through the anal sphincter after they have lacerated the mucous membrane, or have partly produced a contusion of it. At times, foreign substances are inadvertently swallowed, which frequently make their way safely through the alimentary canal until the sphincter ani is reached, when, if large, they may become fixed and are unable to pass through; or, if small and angular in form, they are forced into the submucous tissues, and make their way out through a fistulous opening.

Owing to various functional derangements in digestion, and the wide diversity of the character of the human aliment, because of divers diseased states of the abdominal viscera, the chemical quality of the colon's contents varies from a mild alkaline reaction to an intensely acid or bitter. The irritating quality of the feces keeps up a constant irritation about the anus, which, when the individual is prone to various cachexiæ, lights up an inflammation, which produces certain definite pathological conditions.

Treves says, that the lower third of the rectum is highly sensitive to any description of irritants or foreign bodies; which is true, in serious diseased states of the bowel, when the anus is involved; but, that it is correct, when applied to the healthy bowel, would seem an error; for, we can in nearly any child-bearing woman before evacuation, feel the rectum fully distended with feces, and yet she complains of no inconvenience. It is only then, when the ano-rectal segment is inflamed, that one is conscious of an irritation or pain in this situation. This will partly explain why in one child or adult, ascarides produce such extreme pruritus, and in another none at all, and why, in one, piles are so tormenting, while in others they occasion no inconvenience whatever.

Pathological Changes and Degenerative Conditions in the Sphincter Ani. In early childhood, for some time after the little one suddenly changes his attitude from creeping or semi-horizontal to the erect, in locomotion, as his sphincter has not yet developed sufficient strength to hold up the feces, the spinal column is straight, the perineal muscles are undeveloped, and hence evacu-

tions are often quite involuntary. In some children this lasts into the eighth or ninth year. It is now, too, that we will observe the prolapse of the rectum (hernia recti) through the yielding sphincter. We do not see this accident until after walking is commenced, and seldom after puberty.

As might be expected, in a structure so constantly exposed to traumatic and degenerative influences, structural changes set in early in the anal sphincter. The pathological lesions here are most commonly of a *secondary* order, and are primarily, in the majority of cases, of a *vascular* origin.

Inflammation succeeds vascular stasis or malnutrition. *Ulceration, hemorrhage,* or atrophic changes follow, under certain circumstances. All pathological conditions which involve the anus are dependent on *constitutional* and local *conditions.*

What *rôle* does *infection* play as a causative factor in the *etiology* of anal lesions? My impression is that it exerts but a very subordinate influence, if any at all, in these lesions where the general health is good. More or less denuding of the mucous investment of the external sphincter, with loss of surface epithelium, must be of very common occurrence. Now, whole myriads of the bacteria coli communes pass over these surfaces in the fecal current daily. This germ we know is a constant inhabitant of the colon, and bacteriologists tell us that it possesses very active pyogenic properties.

Anal abscess is not a common lesion in healthy individuals, and as a matter of fact, in healthy individuals free from struma, an incision through the anus or operation on the rectum heals quite as well as in any other regions of the body. Open sores, no matter how limited their areas when occupying the anus, are always attended with a low grade of inflammation, are painful, and cause much suffering. Inflammation is transmitted from the periphery through the lymphatics to the elements of the muscle, and this excites a spasmodic contraction of the sphincter ani.

We will sometimes find the anal sphincter, the seat of fibrous degeneration, and in such a contracted state that it will easily rupture on dilatation. In others, who have had tuberculous ulcerations about the inner rim of the verge, which have healed, there is loss of muscular tissue, with numerous scars, thereby causing contraction of the anal outlet.

Cancerous or syphilitic infection seldom involves the epithelial covering of the anal mucous membrane, as a primary process. Degenerative changes, however, are commonly observed in the sphincter ani, as age advances, in many individuals. The most common type of this is a fibrosis of the muscular fasciculi. There is a thickening of the sarcolemma, the muscle sheath, and other fibrous elements become thickened, indurated, and inelastic. The sphincter, however, retains its contractile power, but it can not dilate beyond a narrow limit. This phase of pathological change, when it sets in early, is always strongly suggestive of syphilis.

The female's sphincter ani and whole ischio-rectal region are so unlike the male in composition and function, that a general description applying to one will not answer for the other. For this reason, and as the scope of this contribution is limited, its consideration must at present be omitted.

Treatment. The sphincter ani is the key to the treatment in the management of all ano-rectal maladies. It is the portal through which we must enter to inspect or manipulate all lesions on it, or within it. The greater number of painful affections, immediately involve it, or are in almost direct contact with it. Serious or painful lesions of the rectum are seldom more than two inches above this muscular valve. When it is patulous and distensible, our way is clear to expose, inspect, or treat every type of lesion which may involve what may be properly regarded as the *pathological area* of the rectum, its lower fifth.

Hemorrhoidal tumors, ulcers, fissures, fistulas, bleeding papillomata, condylomata, epithelioma, prolapse, stricture, etc., with rare exceptions, involve either the overlying or integral parts of the sphincter ani or this segment of the bowel. We may treat the anus without encroaching on the lower rectum, but not contrawise. The intestines' recesses can not be penetrated without widely opening the sphincter. By the thorough, cautious, and complete dilatation of this we are made masters of the situation, and one of the most important steps of the average, current operation on the ano-rectum is accomplished. In fact, the mere stretching and massage of the anus alone, in a large number of cases, will accomplish cure without any further interference.

Now, to perform effective and proper dilatation there are several things to be studied and considered. The two most impor-

tant, however, are, first, to render the ano-rectal area painless, for this is an exquisitely sensitive region, and, secondly, manipulate the anus. In former times this was accomplished by pulmonary anesthetics, but many deaths, in operations on the rectum, have been reported under chloroform, and when ether is administered enormous quantities are demanded before the anal reflexes are paralyzed and the pain sense inhibited. Besides, while one is operating under this, unless forcible tamponing of the rectum is employed with the violent forcing and straining of the patient, feces are squirted over every thing. But, the most formidable objection against all pulmonary anesthetics, is in those patients who have pulmonary, cardiac, or renal disease.

Happily for humanity and the operator, we now have a local analgesic of great potency, which without doubt in the near future will very largely supplant pulmonary anesthetics. Nearly every operation on the ano-rectal zone may be performed with the greatest satisfaction by cocainization alone.

"Flies may be caught with molasses," but intelligent, observing physicians are not to be won over in a day by glittering generalities and the record of highly colored reports, but as soon as the timid or conservative practitioner becomes more fully acquainted with the properties and the surgical technique of cocainization in surgery, his resort to ether or chloroform in operations on the anus or lower rectum will be rare. In this situation opportunities are offered for the successful employment of cocaine that are wanting in many others. For instance, we can utilize the absorbent powers of the mucous membrane as an accessory to our hypodermic injections.

In manipulation of the anus, rigid asepsis, by slow, cautious, and steady dilatation of the sphincter, the force being employed in the direction of the long axis of the muscles, we will succeed, when the anus is not contractured, in opening a way for efficient exploration and treatment.

New York.

SOME THOUGHTS ON THE ETIOLOGY AND PATHOLOGY OF HEMORRHOIDS.

BY SAMUEL T. EARLE, M. D.,

Professor of Physiology and Diseases of the Rectum in the Baltimore Medical College.

[Written for MATHEWS' MEDICAL QUARTERLY.]

The unsatisfactory causes that have been assigned for the production of hemorrhoids led me several years ago, while working in the Pathological Laboratory of Johns Hopkins Hospital under Prof. Welch, to investigate the subject. I first undertook to produce hemorrhoids artificially in a dog by ligating the inferior mesenteric vein; the dog died from peritonitis in thirty hours after the operation. The autopsy showed a hyperemic zone in the upper part of the rectum. I then ligated the inferior mesenteric artery; the dog lived and did perfectly well; at the end of three weeks he was killed and we were not able to find any pathological lesion in the rectum, nor were we able to find in either case any resemblance to either an internal or an external hemorrhoid. I then began a microscopical investigation of the condition of the vessels and surrounding tissues of hemorrhoids in various stages of their development, with the hope of gaining some insight into their etiology through their pathology. The following are the results:

Dilatation of veins.

Accumulation of leucocytes in veins, especially in the periphery; also of blood plates with the leucocytes.

Small-celled infiltration in the walls of the veins.

Small-celled infiltration in the tissue, diffuse and *in foci.*

Plasma cells in the tissue.

The dilatation of veins seems to be mostly on the side of the section covered with flat epithelium (integumental side). Here also the connective tissue is dense and of coarser fibers. Patches of yellowish-brown pigment, indicating old hemorrhages.

Irregular fibrous thickening of walls of dilated veins.

Hyaline metamorphosis of venous wall (few nuclei).

Venous capillaries near epidermis filled with leucocytes (thrombi).

The most extensive dilatation of veins is between epidermis and smooth muscle (sphincter), not in all sections, however. Also hypertrophy of muscular coat of some veins, but those most dilated appear to have atrophied walls.

Thickened longitudinal bundles of muscles in some veins.

Thrombi composed of fibrin, plates, and leucocytes in veins.

It looks sometimes as if the walls of the extremely dilated veins were thin and atrophied, and those of partly or not dilated veins were inflamed.

Does inflammation of the venous wall precede the dilatation?

Does hyaline degeneration, or coagulation necrosis of venous wall, precede dilatation?

Arteries in places seem to have hypertrophied muscular coats and thickened membrana limitans interna; also endarteritis obliterans; calcification of arterial wall; connective tissue compressed and atrophied by ectasis of veins.

These conditions seem to point to the vessels, both arteries and veins, as the prime factors in the etiology of hemorrhoids. We find an inflammatory condition of the vessel walls, which is most likely primary, and which is followed by hyaline degeneration of the same, with subsequent dilatation, a condition that may be and most likely is the result of long-continued pressure brought about by the prolonged stay of fecal matter in the rectum of man. Hence, hemorrhoids are unknown in the lower animals, because in them this condition is not allowed to exist, evacuation of the rectum always following immediately upon the stimulation of the center controlling defecation by the presence of fecal matter. The fact shown above, that the most extensive dilatation of the veins occurs between the epidermis and the sphincter adds additional force to this explanation. The office of the sphincter is to keep closed the orifice of the rectum. When there are no feces nor flatus to control, the muscle is in a state of passive contraction; when either of the above are present to stimulate it, it is in an active state of tonic contraction; this constricts the vessels, brings about a local increase in the blood pressure, the prolonged existence of which would be likely to result in the changes in the vessel walls mentioned above. The condition is likely one of slow growth, although the culmination may be of an acute character.

There may also be other conditions besides those mentioned above that may cause the same condition in the anal and rectal vessels, for instance, such as produce varicose conditions of the vessels in other parts of the system, but in the rectum the most probable and frequent cause is the presence of the feces.

The above report also shows a small-cell infiltration in the tissues, showing, as pointed out by Mathews, Kelsey, and others, that a hemorrhoid is not simply a varicose condition of one or more veins, but also an increase in the connective tissue surrounding them; the inflammatory condition found in the walls of the vessels also extends to the surrounding connective tissue.

BALTIMORE.

TROJE: A CORTICAL CENTER FOR BLADDER AND RECTUM. (*Deutsche Med. Wochen.; The Review of Insanity and Nervous Diseases.*)

The following interesting case is described: A girl, aged eighteen years, sustained a fracture and depression of the skull at the age of one year and a half. Since her twelfth year she had suffered from epilepsy of a cortical type, beginning in the left arm. A temporary craniectomy of the depressed skull showed a cystic degeneration of the gyrus supra marginalis, the posterior part of the middle section of the gyrus post centralis and of the posterior part of the gyri around the fissure of Sylvius. The clear contents of the cysts were evacuated, the septa of degenerated brain tissue broken down, and a projecting ridge of bone removed. There were no convulsions until the twentieth day, when they were severe. A mild spasm also occurred on the forty-seventh day, after which none occurred. The main point of interest is that a disturbance of innervation of the bladder and rectum was noted during the first fortnight. This coincides with a recent publication by Bechterew, who demonstrated a center for the bladder and rectum within the cortical area for the anterior extremity in the dog.

Gastro-Intestinal Disease.

THE MANAGEMENT OF HERNIA IN CHILDREN.

BY AP MORGAN VANCE, M. D.

[Written for Mathews' Medical Quarterly.]

The treatment of hernia is a subject always interesting to the practical surgeon, and one in which the general profession should take more interest than they do.

The management of this ailment in children should receive our very best attention, for just in proportion to the youth of the patient is the chance of doing permanent good. The fact that hernia in children is cured with comparative ease, coupled with the fact that such a large proportion of the herniæ met with in older patients are originally congenital, is proof that treatment of infantile hernia is greatly neglected. The reason for this is obvious, and lies in the almost universal ignorance on the part of the family physician as to the proper conduct of such cases; the common management being for him to tell the parents to "get a truss," possibly referring them to some druggist friend or neighboring instrument-maker; the result being the mother is never properly instructed in the use of the more than likely improper instrument obtained, and, of course, the child is tortured for a few days, when the instrument is discarded; the usual history being that the child cried and could not wear it.

It is a fact that the use of spring trusses is impossible in very young children, say under one year of age; it is also a fact that the vast majority of herniæ present soon after birth should be cured before the child begins walking. Therefore it is necessary to use some form of truss which the constant soiling will not destroy, at the same time being comfortable and efficient in retaining the hernia. For the last fifteen years I have used a belt or truss made of canton flannel, as follows: a pelvic band folded twice, as broad as three fingers, that is, four thicknesses of the material, then quilted so as to prevent wrinkling; meeting this at right angles, one third of the way from one extremity, is

a perineal strap one third as wide as the former. At the junction of these is stitched a pad of the same material, formed to suit the individual case.

A pattern truss is furnished the mother, and she duplicates it in sufficient numbers to be sure of having a clean one always in reserve; and these are washed just as are the child's napkins, and whenever necessary a fresh one is applied, a safety-pin being used to confine this belt.

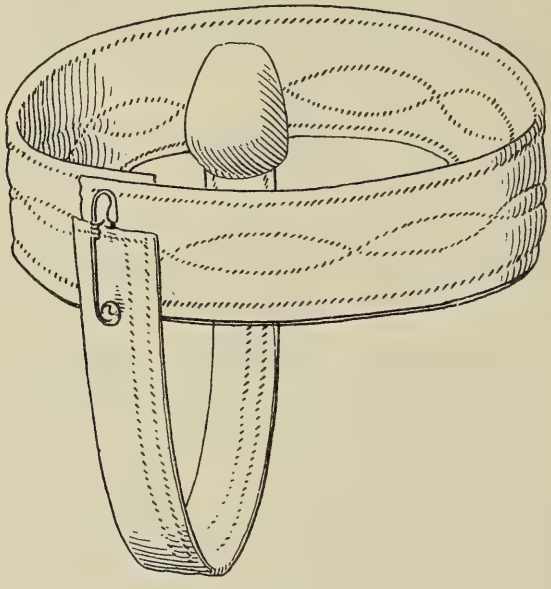

Fig. 1.

The mother is directed how to manage the hernia, and what is to be expected of the appliance. She is told that each time the hernia descends the treatment begins anew; and is taught how to retain the protrusion by the aid of the finger; how to apply a fresh pad, having the child horizontal; how, during the baby's bath, constant care is necessary, and in every way impressed with the great watchfulness and care necessary to a successful outcome. This appliance is shown in Fig. 1. I believe it to be infinitely superior to the "hank truss" in every way, particularly in the ease with which it is applied, and the fact that excoriations never occur under its use. The broad pelvic band also supports the whole pelvic contents, and in this way aids very much in the retention.

In restless children and aggravated conditions the use of an

additional pad, of folded rubber adhesive plaster, further insures the relationship of the truss to the body, as it adheres both to the body and the pad. It is well known that just in proportion to the age of the patient is the tendency for the hernial openings to contract spontaneously, just as they do after the descent of the testicle. And it is astonishing how very rapidly this closure will occur in infants who have hernia, when the protrusion is prevented absolutely from entering the canal. Therefore, too much stress can not be placed upon the importance of carefully educating the mother and nurse in these cases, the success, as before stated, depending entirely upon their watchfulness.

Children from eighteen months and upward can use the spring trusses, though I have time and time again treated children four or five years of age with this canton flannel truss. The best form of spring truss is that which encircles the pelvis, the ends of the spring being behind, resting on pads over the sacrum. In this way the relationship of the pads to the body in front are uninfluenced by any movement on the part of the child.

There are a number of different trusses made upon this principle on the market. Hood's pattern covered with celluloid or hard rubber is a good sample of this form of truss.

The same necessity for perfectly instructing the parent or nurse is even more marked in the conduct of these older cases, as the patients are not so constantly under their eye, and are subject to many more causes which would antagonize the result; particularly is it necessary to gain as far as possible the co-operation of the little patients, and endeavor to educate them to aid in the treatment, that is, rather than displace the truss for any slight discomfort to ask for an examination and readjustment.

I have found, in cases where it was impossible to control a child in this regard, that after the Hetonian operation, followed by a month's absolute quiescence in bed with perfect trussing by the canton flannel belt and adhesive plaster pad, the hernia was vastly more easy to manage under the spring truss with a soft flat pad, usually made of a piece of silk sponge covered with kid. I do not believe that the Hetonian injection has any other effect than that of aiding the truss; the month's confinement in bed of itself would probably do a great deal of good without the injection. However, the injection does no harm, and pos-

sibly the mass of benign lymph resulting may have some influence in aiding the contraction of the hernial opening.

I would never think of discontinuing the truss under a twelvemonth after the sojourn in bed; then tentatively, as the discontinuance of a truss in any case of hernia should be experimental. Careful examinations by the physician should be made at no great intervals; and when, to all appearances, the hernia is cured the discontinuance of the truss should be begun, that is, the child should have the truss removed, and be allowed to take gentle exercise; if, however, any violent efforts are expected, the truss should be replaced temporarily. Increased watchfulness is necessary at this stage of the case, and not until a fair test has been made should the truss be entirely discarded.

To illustrate the possibilities of this form of soft truss, I will report the following case:

B. M., aged twenty months, was referred by Dr. T. R. Walker, of this city, for operation. This child was the subject of double oblique inguinal hernia of enormous proportions. It had been

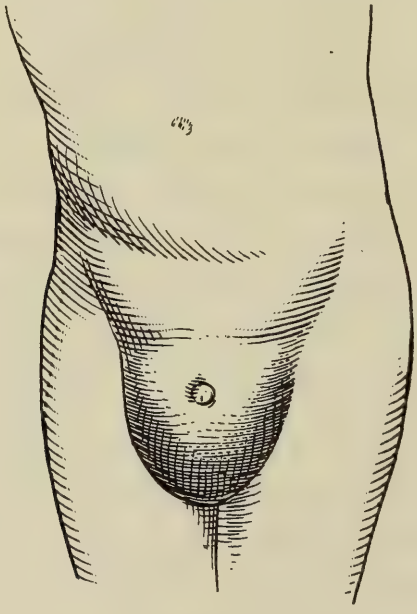

Fig. 2.

found impossible by the parents, under many forms of trusses, to at all retain the protrusion. These, I believe, were the largest herniæ I have ever seen in a child this young, reaching, as the cut will show, one half of the way to the knee. (Fig. 2.) It

was not for a moment considered other than a case for operation; the child, however, being very uncontrollable, and the reduction of the herniæ seeming to give discomfort and cause difficulty in respiration, it was considered best to subject the child, and also the herniæ, to a certain amount of training before the operation was undertaken. It was thought best to reduce the herniæ and endeavor to retain them within the abdomen, and in this way educate the parts to tolerate the new arrangement of things. To effect this, a pair of pads covered with rubber adhesive plaster were applied over the very large openings, admitting easily two fingers; over these pads a very broad pelvic and abdominal bandage and two perineal straps were applied, confined by large

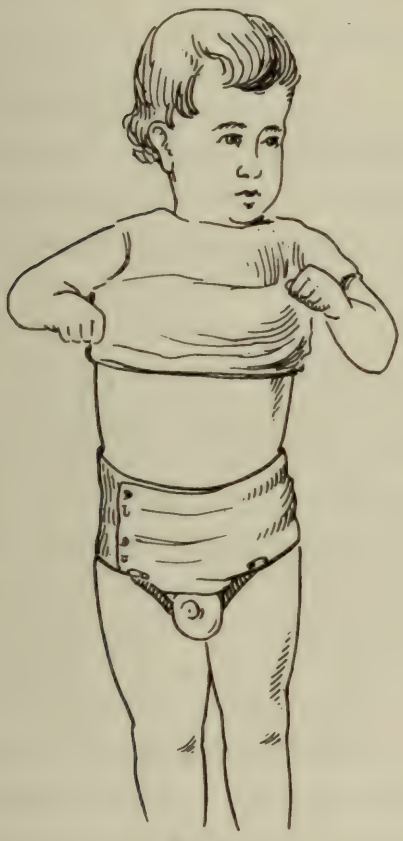

FIG. 3.

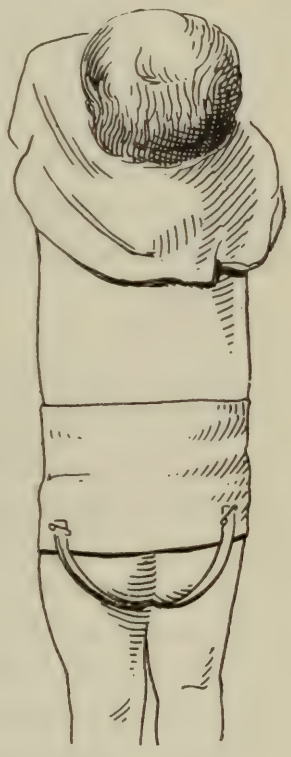

FIG. 4.

safety-pins. (See Figs. 3 and 4.) The child seemed to be quite uncomfortable for a few days, as the forcing of the abdominal viscera upward evidently interfered with the descent of the diaphragm. Very shortly this discomfort disappeared, and the radical operation for both herniæ would have been done, but an

intercurrent malarial attack, with high fever, prevented, and the child was not in condition again for operation for more than a month. During this time the herniæ were retained with comparative ease, and it was determined to see what could be accomplished by conservative efforts toward cure.

The herniæ have been under perfect control for four months, and there is every prospect that a cure will result.

In such aggravated cases as the above I think the broad pelvic and abdominal band is very important. It has been proven in this particular case that it alone will prevent the descent of the herniæ, seemingly accomplishing this by simply supporting the abdominal contents between the pelvic wings.

This possibility in these cases was suggested to me by Dr. Howard Vance, who practiced the method while an interne at the Hospital for the Ruptured and Crippled, New York, in aggravated cases, supplemental to the spring support used there.

In closing this short paper I would like, again, to emphasize the great importance of the proper education of the little patient's attendant as by far the most important element in the successful treatment of infantile hernia.

LOUISVILLE.

LANDMARKS OF THE DIGESTIVE TRACT.

BY F. BYRON ROBINSON, B.S., M.D.,

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[Written for MATHEWS' MEDICAL QUARTERLY.]

A landmark is a point where disease is apt to arise, and around it the diagnosis will turn from its relations anatomically and physiologically. In the following remarks attention is called to some of the landmarks of the digestive tract. It is thought that the discussion of such landmarks will aid in making diagnosis. I will divide the landmarks of the digestive tract into two classes:

1. Sphincters.
   - (*a*) Mouth.
   - (*b*) Cardiac end of stomach.
   - (*c*) Pyloric.
   - (*d*) Ileo-cecal valve.
   - (*e*) Anus.

2. Flexures.
   - (*a*) Sigmoid.
   - (*b*) Hepatic.
   - (*c*) Splenic.

Sphincters and flexures are the most natural division into landmarks. It might be said that the division into sphincters would rather be physiological, while the division into flexures would be anatomical.

A sphincter is an apparatus which is endowed with the power of contraction and dilatation. The essential idea of a sphincter is that of a muscle surrounding and closing an orifice. The sphincter muscle is always in "tone," and the orifice, when not in use, is closed. The cause of disease arising in a sphincter must be looked for in several directions. In the first place, a sphincter is physiologically very active. It performs more work than the adjacent tissue, and thus will call to it an excess of blood supply. A large blood supply to any tissue means active nourishment. In the second place, a sphincter has a large and complicated nerve supply. The nerves are both sympathetic (non-medullated) and cerebro-spinal (medullated). The involuntary sphincters have chiefly a sympathetic nerve supply and dilate and contract somewhat slowly, while voluntary sphincters are chiefly supplied with cerebro-spinal nerves and act rapidly both in contraction and dilatation. The lymphatic supply is also complicated. It may be said that a sphincter is a delicate and complicated apparatus. It has (*a*) a large blood supply, (*b*) a complicated nerve apparatus, (*c*) a delicate lymphatic system, (*d*) its assimilation is high, and (*e*) its duties are active. The disease to which sphincters are peculiarly liable is malignancy. Cancer is liable to arise in other sphincters, for instance, the cervix and nipple. Wherever delicate, complicated, and rapid changes take place, malignant cell formation is liable to arise. Besides the malignant disease of the sphincters we have other disorders, as, for example, (*a*) reflex action, (*b*) spinal origin, and (*c*) cerebral origin. The above disorders are occasionally termed functional, but such a term is a misnomer, as no mechanism becomes disordered without distinct changes in its construction. At the bottom of sphincter paralysis or sphincter spasm is some irritation or other morbid process. It is true that sphincters are frequently in a state of paresis or spasm without a sufficiently reasonable cause being apparent, yet few modern men doubt that some definite cause is at work, though it eludes the diagnostician.

1. Reflex causes are quite frequent in producing spasm, and

occasionally in producing paresis. Fissures of the anus are a common example in producing spasm of the sphincters, enhancing suffering. We do not know so much as to the exact state of the pyloric and ileo-cecal sphincter, but it is likely it is under the same law as the visible sphincters. A paretic state of the anal sphincter may arise from irritation or pressure of tumors along the lower colon. The irritation, say from the sigmoid, passes up the inferior mesenteric plexus to the abdominal brain, whence it is reflected over the superior hemorrhoidal to the rectum, resulting in overstimulation and paresis of the anal sphincters. Other irritation may induce paresis of the sphincters, as, for instance, a crushed testicle, trauma of the bladder, uterus, or ovaries.

2. Spinal causes of spasm or paresis among the digestive sphincters are quite frequent. The cause is inflammation or pressure in the cord or in special portions of the cord which exercises control over the sphincters.

3. Cerebral causes induce spasm or paresis of the sphincters. It is common to observe how fright will paralyze the sphincters in children, or even adults. Among animals a good sample is where a herd of cattle are suddenly started on a ship, when defecation becomes uncontrollably profuse.

I. The mouth is a typical sphincter, chiefly under the control of the facial nerve (cerebro-spinal). Its chief ailment is epithelioma. The peculiarity of the oral epithelioma is that by extirpation in early manifestation of the disease cure often follows. Fissures of the mouth (cracked lips) are significant for pain.

II. The cardiac orifice of the stomach is not so typical a sphincter as some of the others of the digestive tract. This sphincter is chiefly supplied by cerebro-spinal nerves in the tract of the pneumogastric nerves. In this sphincter most practitioners have met cancer. In my experience cancer in the cardiac sphincter of the stomach has been rapidly progressive. Here will also frequently occur cicatricial contraction from swallowing irritating substances. In the horse the cardiac orifice of the stomach is widely dilated, so that it appears as part of the stomach. This, together with the fact that the undilated part of the esophagus, which leads into the widely dilated lower esophageal end, suddenly opens into the pouch in a perpendicular

manner, accounts for the peculiar clinical fact that a horse can not vomit.

III. The pylorus presents a typical sphincter, and may be called a physiological anus in contradistinction to the mechanical anus at the rectum. The pylorus consists of an accumulation or heaping up of the circular muscular fibers of the lower end of the stomach. This bundle of fibers project into the gut lumen, for the external longitudinal muscular fibers seem to pass right over them, leaving an even surface. The pyloric sphincter is well supplied with both cerebro-spinal (vagi) and sympathetic nerves. It is a slow, rhythmical sphincter, and must hence be highly furnished with sympathetic or demedullated nerves. It is a very strong sphincter, and by many examinations one will find that it consists of a large aggregation of muscle fibers. The pylorus is surrounded by many important structures. If one takes a silver dollar he will find that it will touch the following structures: (*a*) the duodenum, (*b*) the gall-bladder, (*c*) the hepatic flexure of the colon, (*d*) the head of the pancreas, (*e*) the suprarenal capsule, (*f*) the right kidney, (*g*) the liver. All these structures will be in the range of a silver dollar, and therefore one can conclude that it is difficult to make differential diagnosis in this region. The pylorus is subject to (1) malignant disease, (2) to stenosis from the formation of fibrous tissue—cicatricial contraction, (3) to ulcer formations, (4) to pressure from tumors, as the duodenum is fixed and can not escape the pressure of a tumor, (5) to suffer from old contracting peritoneal bands. The duodenum is only covered by peritoneum in front. A wonderful relief is given to patients who have pyloric cancer by performing gastro-enterostomy. Gastro-enterostomy can be performed by the aid of the author's segmented rubber plates, or the Murphy button. The operation is valuable because it (*a*) relieves vomiting; (*b*) it stops pain by not allowing the food to pass over the cancer; (*c*) it checks the malignant growth by diminishing the blood supply, for it is the food passing over the mucous membrane of the gut that entices blood to the parts; (*d*) it increases nourishment.

IV. The ileo-cecal valve is the next physiological anus. At the present time, by many surgeons, this region is considered one of the important landmarks of the digestive tract. The ileo-

cecal valve itself is subject to about the same diseases as the pylorus, but not to the same degree. The significant point about this region is the appendicular diseases. M. H. Richardson, of Boston, writes, "I am firmly convinced that appendicitis is the most important acute abdominal disease of the present time." To this statement I can not agree, for Talamon, Treves, and many others say ninety per cent. of all cases recover without operation, and Gutman and Fenger say only five per cent. of appendicitis is fatal. But the cecal region is the most important landmark of the digestive tract. In operating in order to find any definite point of obstruction of the digestive canal the cecum is the standard. First find the cecum, then all other points can be found in any part of the intestine. The cecal landmark of the intestines lies in the right iliac fossa. Whenever peritonitis arises in men or boys we can be pretty sure the trouble arose from appendicitis or from the cecal landmark. The ileo-cecal landmark is important to gynecologists, as often the uterine appendages become infected from the appendix. The infected uterine appendages may infect the appendix and cause appendicular disease. The cecal landmark will be more and more studied by the gynecologist in order to clear up the relations of disease between the appendix and uterine appendages. From many statistics of autopsies it appears that fifteen per cent. of all persons have appendicitis. Appendicular adhesions are found in fifteen to twenty per cent. in *post-mortems*. I have several times found the ileo-cecal landmark in both adult and infant cadavers just under the liver. The cecum had never descended to its home in the right iliac fossa. In this fourth sphincter or ileo-cecal landmark of the digestive tract there occurs fifty per cent. of invagination of the bowels. Two main varieties of invagination occur at this point: (1) Ileo-cecal invagination, where the appendix, cecum, and ileo-cecal valve project into the ascending colon. The ileo-cecal valve forms the apex of the invagination. I have seen this kill a baby in about thirty hours. (2) The ileo-celic invagination, where the ileum projects through the ileo-cecal valve. The apex of this invagination is the ever-increasing and changing end of the invaginating ileum. Thirty per cent. of all volvulus occurs in the cecal region. I have found this in *post-mortem*, but it was not twisted sufficiently to cause death.

Large gall-stones are apt to lodge at the ileo-cecal valve. The right angle formed by the junction of the ileum and colon causes more trouble than it would if the ileum and colon were in a straight line. At the ileo-cecal landmark we may then expect to find (1) appendicitis, (2) cancer, (3) invagination, (4) volvulus, (5) ulcer and fibrous tissue contraction.

V. The fifth sphincteral landmark is the rectum—the mechanical anus. This sphincter is so important a landmark in the digestive tract that many physicians are devoting their whole life-work in caring for its diseases. The anus is one of the accessible orifices of the digestive tract, and is thus amenable to treatment. The rectum is subject to the following diseases: (1) congenital imperforation, (2) hemorrhoids, (3) malignancy (epithelioma), (4) fistula, (5) stricture (and I think many are gonorrheal in women), (6) polypus, (7) ulceration, (8) prolapse (of the mucosa).

Among the so-called functional diseases of the rectum are (*a*) spasm and (*b*) paralysis of its sphincter. The term "reflex" should displace functional. The term rectum was an unfortunate application learned from the dissections on animals when superstition forbade human dissection. The rectum is not straight in humans. Besides, the rectum should be considered with the sigmoid, as the rectum and sigmoid are inseparable anatomically. The woman's rectum differs from man's in possessing a larger ampulla. No doubt the larger ampulla of woman's rectum, together with the opportunity of the gonococcus gaining access to the rectum from the vagina, accounts for the large excess of rectal strictures in women. (Woman has eighty-five per cent. and man fifteen per cent of stricture.) Some estimate that seventy per cent. of malignancy of the digestive tract occurs in the rectum. It is mainly epithelial adenoma.

Two points in the anatomy of the rectum have engaged the attention of many medical men. The first and most important is its circulation; the second is the so-called rectal pockets which exist between the columns of Morgagni. Even to-day special authors on the rectum disagree in regard to the rectal circulation and its significance. The unsettled point in the circulation is in regard to the anastomosis between the systemic and portal circulation. If the portal circulation is intimate with the rectal

anastomosis of the superior, middle, and inferior hemorrhoidal vessels, then the material injected into hemorrhoids may be carried directly to the liver. The material may be also carried to the lungs or brain by the systemic circulation. The rectal pockets have received all kinds of discussions. The questions which all do not agree on are whether the rectal pockets are normal anatomy, or pathological. Dr. Joseph B. Bacon and I investigated this subject in the pig, cow, and dog, and we found that the rectal pockets were absolutely a normal anatomical structure. They are very long and plain in the pig, dog, and cow. I think the pockets are the most prominent in the pig and dog. I have examined over a score of pigs' rectal pockets, and find them quite well marked in nearly every case. So far as I can understand these pockets in the rectum of the human, they appear to me as a normal anatomical structure. What their origin is, it is difficult to say. However, may they not be of a similar origin as the tenæ coli; and the little membrane stretched between the columns of Morgagni may be the remnants of the gut wall, while the columns themselves may be the separated bundles of longitudinal muscular fibers.

The anatomy and physiology of the rectum will bear further investigation. A feature in regard to the rectum is that it has two kinds of sphincter, viz: an external voluntary one, supplied chiefly by spinal nerves (third sacral), and an internal involuntary one, supplied chiefly by sympathetic or non-medullated nerves. The external sphincter and some distance up the rectum is very sensitive, while above the internal sphincter the rectum is quite insensitive to pain. It is supplied by sympathetic nerves, which possess only a dull sensibility. It is for this reason that a patient or nurse accidentally penetrates the rectal wall with the rectal tube in administering an enema.

The second kind of landmarks of the digestive tract I will call *flexures*. We have three flexures, viz: (*a*) sigmoid, (*b*) splenic, and (*c*) hepatic—all in the colon. Sphincters have a high physiological and rhythmical function. These are of an entirely different nature from sphincters. The physiology of flexures is no higher in degree than the adjacent segment of gut. The essential feature of a flexure is mechanical. The flexure must be discussed from an anatomical standpoint. It comes under physics,

and must be called an impediment in a passage. The story is simple, for all forces move easiest in the direction of least resistance. A force moves the easiest when continued in a straight line. The flexure deviates from a straight line, and hence arises a point of irritation. The feces as they enter the colon assume shape and form. They harden, and in their substance is contained all foreign and indigestible particles swallowed. Many of these hard, sharp bodies lie on the surface of the feces when they pass the flexure, and they abrade or wound the mucous membrane of the gut. This wound allows infection and constant irritation to progress into the gut wall, and especially to pass to the peritoneum. The result of the progressive, inflammatory process is a new connective tissue growth, which ends in cicatricial contraction. The small abrasion or wound of the mucosa at the flexure by the foreign body in the feces ends in a *stricture* of the bowels.

The fibrous tissue contraction at the bowel flexure is not the only thing which arises at a flexure. Malignant growths are very apt to arise in flexures, no doubt from mechanical irritation. In all operations for obstruction of the bowels the flexures should be carefully examined. I saw one case where the surgeon operated for bowel obstruction. A malignant obstructive growth was overlooked in the splenic flexure, and the woman died the next day after the operation. The rule which I found to be the best standard in operating on the intestines is to first find the cecum and then move in other directions systematically, examining every foot of the large and small bowels.

I. The sigmoid flexure is a very apt location for disease to arise. In dissecting infant cadavers I find the sigmoid very long and often lying in the right iliac fossa. In one infant, of some six months old, I found a volvulus of the enormous sigmoid. The sigmoid and rectum are inseparable. In the sigmoid sixty per cent. of volvulus occur, and men have volvulus four times as often as women. I was unable to produce a permanent volvulus in experimental work on dogs' bowels. When I stitched it the volvulus would unwind and tear out the stitches or lengthen the pedicle. The cause of volvulus is (*a*) fatless, (*b*) elongated mesentery, and (*c*) a history of constipation.

The peculiar disease to which the sigmoid is liable is stricture (malignant or non-malignant). Seventy per cent. of strictures of the large bowel occur in the descending colon; and this would give a large number to the sigmoid, as the sigmoid is some fifteen inches long, and the descending colon proper is only eight inches long. No doubt the frequent stricture of the sigmoid is due to (*a*) the sharp and hard foreign bodies which lie on the surface of hard feces, and (*b*) the mechanical difficulty of passing through the long, curved gut. A curious feature about man is the sigmoid curve and the rectal ampulla, which must represent some ancient evolutionary stage. A peculiar feature I have long noted in autopsies is that the sigmoid and descending colon are frequently more contracted than the other portions of the large bowel.

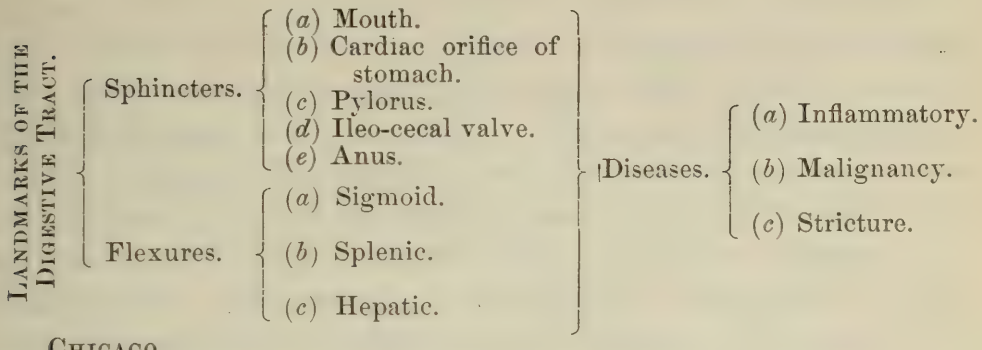
II. The splenic flexure of the colon is peculiar from being the most fixed and the most acute flexure of the digestive tract. It is held firmly in position by the costo-colic ligament. The sharpness of the bend in the colon at the spleen offers considerable mechanical difficulties to the passage of hard feces, and this accounts both for malignant and non-malignant strictures at this point.

Rough, hard feces wound the mucous membrane and allow infection to travel through the gut wall into the peritoneum, and this wound being kept constantly irritated results in inflammation or malignant growths. The inflammatory products organize into connective tissue, ending in contraction or stricture. Tumors and strictures are difficult to diagnose in the splenic flexure, as they are very high under the ribs, and in laparotomy for intestinal obstruction it is often overlooked.

III. The hepatic flexure does not give rise to much intestinal disease. It is not an acute flexure, but possesses a very large angle. Its main difficulty is that it is near the gall-bladder, which frequently gives rise to inflammation, and it spreads to the hepatic flexure. It is held to the liver by the hepato-colic ligament. Besides being an obtuse flexure, the feces are not so solid as they are in the splenic and sigmoid flexures.

It might be suggested that the junction of the duodenum and jejunum presented a flexure sufficient to call for a description. But it is rather a curve, and besides the feces are always fluid in

this location, so that the curve offers little or no obstruction to the fecal current.



Chicago.

THE RELATION BETWEEN THE GROSS ANATOMY OF THE APPENDIX AND THE CLINICAL HISTORY OF APPENDICITIS.*

BY JOSEPH D. BRYANT, M. D.

Whatever poor excuse I might offer as an apology for the infliction to be caused by the presentation of this paper becomes a good reason when sustained by the fact that I have been requested to do so by our mutual and valued friend, Dr. Vanderveer. Dr. Vanderveer even suggested the title, and no doubt based his desire therefor on the fact that through my interest in the subject under consideration, something had been learned of importance as to the value of the comparative relationship of the vermiform appendix to its contiguous tissues, regarding appendicitis. Dr. Vanderveer believes that much light can be shed on the subject of appendicitis by the study of the modifications in its clinical history as influenced by the physical characteristics of the organ. The further fact that I concur with him in this regard is an additional reason for my presence here at this time.

At all events, the anatomical peculiarities of the appendix that affect directly the symptomatology of this defect—appendicitis—relate especially to the location, direction, and extent of the appendix. The local symptoms are the ones chiefly modified by the preceding characteristics of the organ. The emphatic symp-

*Read before the New York State Medical Society, February 7, 1894.

toms belonging to this category may be briefly stated as pain, tenderness, tension, and tumor.

The situation and character of the pain, together with its reflex manifestations, comprise its important elements as modified by the individuality of the diseased appendix causing it. If the pain be dull and throbbing, and be influenced but little, if any, by respiratory movements, the involvement of connective rather than serous tissue is indicated. Later in the case, however, the supervention of serous painful phenomena may be slowly or quickly announced. Appendicitis with primary fibrous tissue involvement is necessarily rare, as then the appendix is extra-peritoneal or is completely environed by inflammatory adhesions, the result of repeated attacks. In but three instances of one hundred and forty-four autopsies made for other than appendicular trouble, was the appendix found outside of the peritoneal cavity. In one of these it was upward, behind the cecum and colon; in another, behind and near to the inner border of the colon, extending even to the liver, and in the third it was behind the colon near to the outer border. It is in accordance with the well-known law, that the character of pain is modified by the kind of tissue involved, to assume that, had either of these appendices been diseased, the primary pain would have been of the connective-tissue type, and continued so until peritoneal involvement had ensued either by extension of the inflammatory process or of abscess rupture. It was my good fortune, but a few years ago, to meet with a well-pronounced case of this kind in Bellevue Hospital. In this instance a dull, throbbing pain had been present for some time beneath the ascending colon, along with tenderness and induration there. Suddenly the acute, agonizing pain, indicative of peritoneal involvement, occurred, quickly followed by peritonitis and rapid death. At the time of the consultation I ventured to predict, (1) the presence of a diseased appendix behind the cecum and colon; (2) extensive connective tissue inflammation and abscess; (3) rupture of abscess into the peritoneal cavity. The results of the autopsy justified each prediction. In many cases of recurrent appendicitis the familiar pain of acute attacks is not present at the outset, and may not appear at all; and, too, respiratory movements cause but little, if any, additional infliction. I saw such a case as this but a few days

ago while recovering from a fourth attack, with intervals of one year each. It is, of course, superfluous to say that primary intra-peritoneal appendicitis causes acute pain, for this is the typical manifestation of the disease. It is proper to add, however, that the mobility and length of the appendix have much to do with the severity and extent of the pain, and also with the rapidity of the diffusion of the poisonous products of the disease.

All are aware that the appendices of some are comparatively "free" in the peritoneal cavity, their movements between the folds of the contiguous intestines being limited only by their mesenteries or their attachment to the cecum. The free extremities of such as these are observed often extending upward from between the intestinal loops, and at this time can be aptly compared to the erect position of the deadly cobra when prepared to strike!

Let us now glance for a moment at the records attesting the freedom of movement of intra-peritoneal appendices. In 66 examinations, 40 per cent. of them were "free," in that one half of the entire length was surrounded by peritoneum. The remaining 40 had mesenteries varying from three fourths to above an inch in length. Surely, gentlemen, the length and the freedom of movement of a diseased intra-peritoneal appendix exercises an important influence on the intensity and area of the pain and the rapidity of the diffusion of the disease-producing elements. Dr. Reginald Fitz, in his oft-quoted and classical article published in the American Journal of Medical Science, October, 1886, says: "Sudden severe abdominal pain is the most constant, first decided symptom of perforating inflammation of the appendix." As a proof of the fact he shows that this manifestation happened in 216 of 257 cases, or 84 per cent. of the number. If we now turn our attention to the per cent. of "free" appendices and those with mesenteries above an inch in length, we find their sum to be 84 per cent. of the entire number also. Certainly this similarity of percentages is a strange coincidence at the least, and leads one to repeat the remark, "There are more things in heaven and earth, Horatio, than are dreamt of in your philosophy." While it is doubtless true that the situation of pain is regulated to some extent by the location and direction of a diseased appendix, still neither time nor utility will permit me to indulge in hair-splitting

distinctions in this regard, based on whether the appendix extends outward, downward, inward, etc., as this feature alone possesses no practical importance except when the appendix extends beyond the usual limit. It may not be amiss to add in this connection that the appendix runs inward in about 25 per cent., that it is curled behind the cecum in about 20 per cent., and extends into the pelvis in 14 per cent. of all cases. The average *post-mortem* length of the appendix in the male is $3\frac{1}{2}$, and in the female $3\frac{1}{10}$ inches, as deduced from 144 examinations. The importance of the frequency (14 per cent.) of intra-pelvic extension should not be considered lightly. Nor can the differences in the lengths of the organ, as between the sexes, be deemed insignificant when it is noted that the half-inch difference between them causes the appendix of the male to enter the pelvis twice as often as it does in the female sex. The clinical importance of intra-pelvic extension of the appendix can not be gainsaid. In a diseased appendix there located, the pain may be nearer the hypogastrium, and, too, it may involve the pelvic peritoneum and modify the action of the pelvic viscera during functional activity. And especially are these facts true if the extremity of the appendix be the portion involved by gangrene or perforation.

Thus far only direct pain has been considered of both the acute and dull types. Reflex pains, while less important than the direct, are, nevertheless, of great diagnostic significance. Frequently during the course of an attack, and especially at the outset, referred pain may be present in almost any part of the abdomen. And, too, it is observed not infrequently in the testicle, perineum, rectum, thigh, lumbar region, etc. In fact, referred or reflex pains may occur at the seat of the distribution of any spinal nerve directly involved by the disease. Fitz has shown that in 213 cases of appendicitis pain was present in the right iliac fossa in 48 per cent., in the abdomen in 36, in the hypogastrium in 5, in the umbilical region in 4, in the epigastrium in 2, and 1 per cent. each in the stomach, hepatic region, left iliac fossa, and right hip and groin. I myself treated a case in June, 1886, in which the pain was referred to the umbilical region only. That this was a genuine case can not be gainsaid, since the appendix was found to be perforated and was removed. The anatomical reason for the occurrence of these reflex pains

can be explained by the well-known influence exercised by the abdominal sympathetic ganglion on the contents of the belly. A misplaced appendix or a wandering cecum will account for an unusual pain-site in a few instances. Without amplification it is sufficient to say now that pain in the right testicle, with or without its retraction, indicates the direct involvement of the genito-crural nerve. The same may be said also of the ilio-inguinal, anterior-crural, etc., when pain is referred to their respective distributions, in connection with recognized or suspected appendicitis.

Tenderness. This, the second of the inherent manifestations of appendicitis, may be either local or general, superficial or deep, keen or dull, depending on the extent, location, and character of the inflammation and the variety of the tissue involved by it. If the extra-peritoneal connective tissue be first involved, as when the appendix is located behind the colon, or behind a cecum not surrounded by peritoneum, or outside the peritoneum elsewhere, and, perhaps, between the layers of the broad mesentery of the appendix, the tenderness is local, deep-seated, and dull at the outset. That such cases as these are rare is obvious on account of the great infrequency of appendices there placed. Quickly, however, the dull tenderness is supplemented and obscured by the acute variety, due to the rapid extension of inflammation to the contiguous peritoneum. The rapidity of the supervention of the acute pain is in direct proportion to the gravity of the lesion and the amount of the connective tissue involved by it. Dull tenderness of much duration is indicative, therefore of a post-colon position of the appendix, and especially is this true in the absence of a meso-colon, which, according to Treves, happened in fifty-two per cent. of the subjects examined by him. Acute tenderness is, of course, strong proof of the involvement of the peritoneum, and its location may be accepted as indicating the site of the initial lesion when it is circumscribed and marks the outset of the attack. If this fact be true, then indeed no definite point of tenderness can be established that may be regarded as diagnostic of this disease. The varying directions of the appendix already cited, the differences in its length and in the situation in it of the point of greatest disease, together with the fickleness of the location of the cecum from which it arises, all

conspire to make the establishment of such a point impossible, and a reliance on it impracticable and misleading. Of general tenderness I will say but little, since it can not be regarded as indicative of a circumscribed process, and is therefore not to be considered of much practical bearing on the arrangement of the appendix. It is proper, I think, to say that in those cases of appendicitis observed by me, in which the diseased appendix was "free," the area of tenderness was far greater than in those not so freely movable.

Tension. This expression refers mainly to tension of the abdominal walls, a tension that may be limited to the side of the attack or be more or less general, according to the extent of the inflammation associated with it. The presence of this tension phenomenon is of beneficent significance, and should incite the profoundest respect of the most skeptical minds. The motor nerve fibers that animate the abdominal muscles are from the lower intercostal, and are intimately connected with the sympathetic supplying the abdominal viscera through the lower thoracic ganglia from which the splanchnic nerves are derived. As a result of this arrangement, in acute peritonitis the muscles of the abdomen become quickly and finally contracted, and thus shield the underlying viscera from external force, and keep them as quiet as it is possible to do by physical means alone. Tension of the right rectus abdominis in appendicitis is an early and important symptom and indicates the presence of limited peritonitis, and fulfills the conservative purposes already stated. And for these reasons the left rectus goes on guard too when its subjacent viscera are similarly involved. Muscular tension in this disease is not limited entirely to the abdominal walls, since the psoas and iliacus muscles also, from nervous involvement or direct implication, contract, causing flexion of the thigh. The bladder and rectum become fretful often, especially if the diseased appendix extends into the pelvis or is attached to the peritoneum at its brim. The cremaster muscle exercises its prerogative on the testicle, if the genito-crural nerve be implicated.

Tumor. This symptom is of dual importance on account of its diagnostic and therapeutic significance. The former attribute alone concerns the tenor of this paper. That the situation and extent of the diseased appendix has much to do with the location

and the determination of the presence of tumor can not be denied. Generally speaking, the location of the tumor indicates the situation of the lesion, and it is especially significant if the tumor be small, firm, deep-seated, and fixed in its position. If, on the other hand, it be large, not firm, superficial, and movable, its bearing on the site of the initial disease is of a general character only. When present, according to Fitz, tumor is detected by palpation from the first to the eighth day of the attack inclusive. In 24 cases, it appeared in 1 on the first day; 3 on the second; 4 on the third; 2 on the fourth; 4 on the fifth; 5 on the sixth; 4 on the seventh, and in 1 on the eighth day. The third, fifth, and sixth days are noticed to be the most prolific ones. Tumor may be present early and yet be not detected till later in the disease, owing to its obscure position; as, when associated with a diseased appendix that is located behind the cecum (22 per cent.); when placed behind the colon (2 per cent.); when extended into the pelvis of the intra-pelvic portion to the diseased part (14 per cent.); with a tympanitic cecum and with general tympanitis irrespective of its location. In the intra-pelvic cases tumor may be detected often there and not elsewhere by rectal or vaginal examination. Still in these cases tumor may escape the vigilance of the closest scrutiny. Owing to time limit I have dwelt only on the leading cardinal symptoms, leaving consideration of the rarer and more curious manifestations for another time. In closing permit me to submit the following conclusions for your consideration:

1. That the location, direction, and extent of the appendix have an important bearing on the clinical history of appendicitis.

2. That the well-recognized variations of the appendix in length, direction, and location, and the varying site of the cecum and of the seat of the disease of the appendix make the establishment of a definitely seated diagnostic point of tenderness unwise and misleading.

New York.

Clinical Memoranda.

GASTRIC ULCER.*

BY J. M. KRIM, M. D.

Mr. V. S., aged fifty-two years; married; occupation florist; family history good; had never been sick since childhood. He commenced complaining about the middle of January, 1892, with pain in the stomach and back, which came on at intervals of two to four days; constipation marked; appetite good. This condition of affairs lasted for about two months, when pain came on at shorter intervals, more severe in character; food was vomited shortly after eating. There was loss of sleep and appetite, and loss of flesh—about ten pounds in six weeks. He had taken various remedies without benefit.

Patient consulted me early in April. Examination revealed the following: Condition very anemic; skin flabby; pulse 90, and weak; respiration 25; temperature normal; urine normal; constipation; tired feeling; not able to work; insomnia; dull, aching pain, with burning sensation in the epigastrium; pain more intense on pressure, a little to the right of the median line; pain more severe after eating, with some relief after vomiting of food; stomach enlarged; considerable thirst. Diagnosis: Gastric ulcer.

I placed him on bismuth and chloroform mixture (bismuth subnit. 1 scruple, chloroform 10 drops, water $\frac{1}{2}$ ounce) to be taken every two hours until there was some relief; ordered absolute rest, with milk diet. Not long afterward, I was called in haste about six o'clock in the evening, and found the patient almost pulseless; very pale; scarcely breathing; extremities cold, and vomiting large quantities of blood. I applied ice to the stomach and gave it freely by the mouth. I also injected three grains of ergotin, whisky, and aromatic spirits of ammonia, which was repeated as indicated, using warmth to the extremities. Patient rallied after eight hours of hard work; hematemesis ceased, and he rested

*Reported at meeting of Louisville Clinical Society, January, 1894. For discussion see page 262.

comfortably. The following day he had a copious tarry-looking evacuation; pulse good; no pain. The bismuth and chloroform mixture was continued, and an enema was given to cleanse the bowels for rectal feeding (pep. milk and beef extract). The patient did well for four days, when he had another small hemorrhage, which was easily controlled. Rectal feeding and the mixture were continued.

On the third day after this I resorted to stomach-washing with chloroform-water (1 dram to pint, twice a day for a week, then once a day for two weeks), which made the patient feel very comfortable, and continued the mixture every three to four hours, allowing small quantities of pep. milk and beef, which was relished. Rectal feeding was discontinued and the patient kept on liquid food exclusively for three weeks, then allowed small quantities of solid food, which gave him no discomfort. He was put upon reconstructives, and made a slow but uneventful recovery, gaining flesh and good color.

He was under my care about three months, then, having removed to the country, I heard no more of him until in August, 1893, when he informed me that he had been entirely well until about two months before, at which time he began to feel badly, and, being advised by friends to go to some watering-place in Germany, he came to ask my advice. I readily approved of it, and he left the following week, remaining abroad about two and a half months at various watering-places.

After his return I was very much astonished to note his decided emaciation and unfavorable appearance generally. He informed me that he had consulted Ewald, and various other prominent practitioners abroad, without any relief. He received no treatment after his return. On December 2, 1893, he had a severe hemorrhage, and died before I reached his residence.

Autopsy revealed the following: Stomach contained about a half pint of blood; there was considerable narrowing of the pyloric orifice. About two and one half inches from the pylorus, on the anterior surface, there was a stellate cicatrix one half inch in length, three quarters of an inch in width, with hardened edges, and involving the muscular coat. At the cardiac end there was a soft mass, two inches long and one inch wide, project-

ing about one quarter inch above the mucous surface. In the center of this was an irregular, apparently recent ulcer, about one quarter inch in diameter, in the center of which was a small perforation. I removed a piece of the mass, had it examined, and was informed that it was a medullary cancer.

I used Hofrath Stepps' idea in regard to the chloroform and bismuth mixture. He claims that ulcers heal more rapidly under this treatment than by any other method he has tried, having had some four years' experience with the mixture.

LOUISVILLE.

A CASE OF STRANGULATED HERNIA.*

BY THOMAS L. BUTLER, M. D.,
Demonstrator of Surgery, University of Louisville.

On the night of January 14th last I was called to see J. M., age forty-one. I found him suffering intensely; had been vomiting; was bathed in a cold sweat. There was a large tumor beginning in the right groin and extending into the scrotum. The trouble was evidently strangulated hernia. About the time I arrived the man made a certain movement in turning on the bed, and the pain directly after was greatly relieved and the vomiting ceased. Whatever this movement was, it evidently reduced the strangulation, and in a few a hours afterward, by the usual methods used in such cases, the entire tumor was reduced. On questioning the patient I learned he had been "ruptured" for twenty-six years, and that it had often been down before, but he had never experienced any great trouble in getting it back.

On examination the sac could be felt, very much thickened, and without the history could have been diagnosed of long standing. He was wearing a truss, but one not at all suitable to his case. I saw him next morning, in fact met him on the street, and warned him of his danger, advising him to get a new truss immediately. Two days after this I was called hurriedly to see him, and found the hernia down and strangulated again. Immediate operation was advised, and as he was suffering such intense

*Reported before the Falls City Medical Society.

pain he readily agreed. An incision was made from the external ring down over the tumor and the sac exposed. On opening the sac it was found to be a large enterocele, fully four feet of gut being strangulated. It was very dark from the passive congestion, but evidently not gangrenous, as it had been down but a short time. There was an effusion into the omentum, making it necessary to make quite an opening at the external ring, which was the seat of the constriction. The testicle and cord were so adherent to the sac that it was impossible to separate them, in fact it looked as though they were imbedded in the wall of the sac. The cord could not be traced. After several attempts I desisted, fearing that I might do some injury. The cut fibers of the external oblique were sutured down to Poupart's ligament, closing the opening as well as possible without producing constriction of the cord or hernial sac, and closing the external wound in the usual manner with silk-worm gut after stopping all hemorrhage. The operation was done about four o'clock in the afternoon. I saw the patient the same night and all seemed well.

The next morning I was called to the house, and found what I supposed was the hernia down again; the tumor was very large, fully as large as before, and very tense, but no symptoms of strangulation. The patient was put on the table again, although his condition was somewhat weakened. After opening the wound the tumor was found to be composed of blood clots. The hemorrhage seemed to be a general capillary oozing. After cleaning out the clots by hot irrigation another attempt was made to separate the cord and testicle from the sac, without success. By this time the man's condition was extreme, from the two operations and loss of blood. His pulse was very weak, scarcely perceptible, and respiration very much embarrassed. What was done had to be done quickly. As he was somewhat of a "bleeder" I did not want to take any more chances with hemorrhage. I decided to take out sac, testicle and all, which was done quickly by tying a heavy silk ligature around the entire mass. The external wound was packed with iodoform gauze and the patient gotten off the table as soon as possible. He has since done uninterruptedly well, the old tract being entirely closed, as it healed from the bottom by granulation. I present the specimen of the

sac and testicle to the society this evening, and believe the members will bear me out that they are inseparable. In both operations I was ably assisted by Dr. Bullock, and in the last also by Dr. Lucas.

LOUISVILLE.

GASTROSTOMY FOR CICATRICIAL STENOSIS OF ESOPHAGUS; REPORT OF CASE.

BY FOUCHEE WARREN SAMUEL, A. B., M. D.,
Surgeon to City Hospital.

[Written for MATHEWS' MEDICAL QUARTERLY.]

Kate Kendall, seven years old, a healthy, robust mulatto, on September 12, 1888, drank from a cup that contained the lye which her mother had placed by the water bucket after the morning washing was done. Being very thirsty, she filled the cup with water by dipping it into the pail, and drank freely before she recognized that something was wrong with the water. She evidently took in a good quantity, for in about twenty minutes she began to complain severely of the pain located in the throat and epigastrium, and was followed by a vomiting spell. The neighboring druggist gave some medicine, and I was called next morning, twenty-two hours after the accident, and the above statement was elicited from the mother.

I made an examination of mouth and fauces, which was negative, with the exception of a considerable amount of congestion of fauces, which I attributed to the constant tendency to cough and the expectoration of frothy mucus. She continued to complain of pain which was located at the tip of ensiform cartilage. The child's robust appearance was very striking, and I ordered her to drink a little milk, which was retained, and she said gave little or no distress in gullet. I expressed my belief to the mother that on account of the possible dilution of the lye and the slight distress that followed in first twenty-four hours that she would more than likely escape the narrowing of the esophagus due to the corrosive action of lye. I advised a fluid diet for a few days, and cautioned her to be on the lookout for signs of obstruction. I never saw the case again until the first of December, when I

TWO WEEKS AFTER OPERATION.

FIVE YEARS AFTER OPERATION.

was recalled. The transformation was most marked—she was but the shadow of her former self. I was informed that she began to "spit up" her food about six weeks after the accident, and that coeval with regurgitation of food, some difficulty was experienced in swallowing (dysphagia). A physician prescribed on one occasion for her, diagnosing it an attack of dyspepsia.

When I saw her, on December 1st, semi-solids were regurgitated and only liquid food could be retained. I withdrew all semi-solid food, substituting milk in small quantities every two or three hours, and twice daily a nutrient enema with a small quantity of whisky. She was also put to bed, and the above diet was given at regular intervals in the hope of allaying the irritation at site of stricture, as well as to give some strength. This plan was pursued about two days with some benefit, as the vomiting ceased and she took the milk in small doses (half ounces) very slowly, and it was retained. At the end of two days' rest I endeavored to pass a soft esophageal bougie about the size of a No. 12 English catheter; after repeated trials, I failed entirely. Waiting twenty-four hours, I repeated the attempt at introduction of bougie, but with no success. I requested my partner, Dr. J. M. Holloway, to make an effort to pass the obstruction, and after he had made repeated trials with the smallest olive-pointed bougie, he failed. Dr. M. F. Coomes also failed to pass the obstruction. They concurred in the opinion that as long as she could take milk and retain the enemas, and that if she could be held up by this means, that cautious attempts with bougies should be given further trials. I continued to make trials of the bougie for five weeks without the slightest progress so far as getting any dilatation or passing through stricture. The case by this time had rapidly lost ground, and my presence with the bougies was the signal for crying, struggling, and great resistance on her part, and coaxing was of no avail. Her condition was pitiful in the extreme. In her starving condition perseverance now with the bougie was to me cruel, and, the parent refusing an operation, I made no further attempt at dilatation. The mother, seeing that I was anxious to give up the case, now consented to an operation. Her condition at this time from starvation was extremely pitiful, even the milk was being regurgitated, and they, beginning to recognize that further attempts with the bougie were cruel,

consented to an operation. I here report the history in detail to verify what can be accomplished even in seemingly forlorn cases:

Operation, February 8, 1889: Under chloroform, administered by Dr. Marvin, an incision seven centimeters long was made parallel with and about three centimeters distant from the margin of left costal cartilage and carried right down to the rectus; the fibers were then separated by blunt dissection and the posterior sheath slit up; the emaciation was so pronounced that the muscles were harsh and dry, and not the slightest sign of fat was visible during the dissection. The peritoneum was opened to full extent of incision. No difficulty was experienced in finding stomach, as it projected from beneath the left lobe of liver, and was easily delivered. As much of the stomach wall was held through the incision as we thought consistent without doing harm by producing too much traction upon the esophagus. Time being a most important element on account of her exhausted condition, the stomach was as quickly as possible and in the simplest manner anchored in the wound. This was done by twelve silk sutures passed first, about one centimeter in length, through muscular coats of stomach and about two centimeters from edge of incision through entire thickness of abdominal wall. This gave good approximation. Two silk sutures were then put in at each angle and all the sutures were tied; now two sutures were passed through muscular coat of stomach parallel to each other to act as guides to subsequent opening of stomach. (Bryant.) The dressing consisted of sterilized gauze and absorbent cotton with binder. She was placed in bed with bottles of hot water along trunk and extremities, her temperature being subnormal (97° F.) shortly before operation was begun. She reacted well; complained at no time of any pain, and asked for water, which was withheld for four hours after operation, when a few teaspoonfuls were given and a nutrient enema was administered, and water was from this time given in half-ounce doses every two or three hours as thirst was excessive.

The next day the nurse called my attention to the fact that she could take the half ounces of water without any difficulty in swallowing. The ease with which fluids pass after a gastrostomy has been noted by others, so I decided to wait until the fifth or sixth day before opening the stomach in order to insure firm

adhesion. I discarded the enemata and ordered milk in half-ounce doses every two hours, which was swallowed without distress. This diet was continued till the sixth day, when the stomach was opened by quickly inserting a tenotomy knife, while the two guiding sutures were made taut so as to fix the cone of the stomach wall outside; the two sutures had changed from their original site (middle of field of operation), and were now well up in angle of the wound. A No. 9 catheter was introduced, which closed effectually the incision in stomach. About four ounces of milk were immediately poured through tube into stomach. This was repeated every four hours, and after three or four weeks she was allowed to take milk and water in her mouth and blow it through tube into her stomach. This was done to satisfy the taste. Whether or not any benefit is derived by the fluids being first mixed with the fluids of the mouth, so far as a physiological process is being obeyed, her improvement from the time she was allowed to take the milk and soup and some broth this way was remarkably rapid, she being able in two weeks to walk about the house, and stood alone for her photograph with the tube *in situ*. Four weeks after the stomach was opened I replaced the No. 9 catheter with a tube the caliber of which was about the size of a No. 30 French sound. Some force was used to do this, but as the stomach exposed is absolutely painless, it was easily accomplished. Through this size tube she would take finely-hashed meat in small quantities at a time in her mouth and then take a sip of water and blow it into stomach with great ease. Often the tube would become plugged, but its removal and cleaning was easy, it was washed with very hot water every twenty-four hours to cleanse it and keep it free from becoming the source of infection from decomposing food. In no instance did she suffer, as long as she wore the tube, from any gastric disturbance. Looking at the fact that she was a negro, and that she was surrounded with the filth of a negro tenement house, it is remarkable that she escaped such evils. The only accident that happened was induced by her eating some candy given by schoolmates, it causing some vomiting, but this irritation was only transient.

Three months after the operation she contracted measles, which was attended by a severe cough, and this was a crucial test to the strength of the adhesion.

At the present writing—it is now five years since she was operated upon—she enjoys perfect health, and has not used the tube for over three years. In this period she has been constantly under my observation (by actual test of different foods by myself), and after the tube was dispensed with, she partook only of semi-solids, which gave no trouble in the esophagus, so that I was induced in a short time to allow her to take the ordinary diet prepared at her home.

She has a small fistula remaining, which admits only a small probe. I have reported this case in detail because it brings out a very interesting question.

There seems, so far as the act of swallowing food is concerned, a cure of stricture by simple rest afforded by a gastrostomy, as no bougie was used to dilate stricture after the operation was done.

In esophageal stricture the operation of creating a permanent gastric fistula for the introduction of aliment into the stomach has in the past been allowed to languish, meeting with little or no success by surgeons at the time of its birth.

Introduced by Egebert, a Norwegian surgeon, in 1837, as a a mere speculation, the feasibility of the operation was not recognized until Sédillot, in 1846, first performed it upon a human being, and gave it the name of "gastrostomy." Although his success was far from encouraging, he urged and advocated it in many diseases requiring rest to the esophagus.*

The high mortality that has attended gastrostomy in the past has restricted it as a measure for cicatricial stricture only as a *dernier ressort.*

With the important improvement advanced by Mr. Howse of operating in two stages, and his success, depended the general adoption of the operation, and it at once received the sanction of the profession as a sound surgical procedure, not only for the saving of life, but the mitigating of much human suffering. Even with the improvement of Mr. Howse, the operation continued to suffer from the drawbacks of the resulting fistula by reason of the leakage after feeding, which caused a distressing eczema, and which is frequently followed by ulceration that often becomes very intractable.

* Greig Smith.

But at the present time, with the rapid improvement in operative technique and the evolution of wound treatment, gastrostomy has been robbed in a great measure, not only of the annoyance of leakage, but also the danger dependent upon delay in opening the stomach when the vitality of the patient has been reduced by starvation. Lately several methods have been devised by which leakage may be prevented:

Method of Hahn (Myer, *Annals of Surgery*): An incision, following the line of Fenger, is made close to costal margins, the

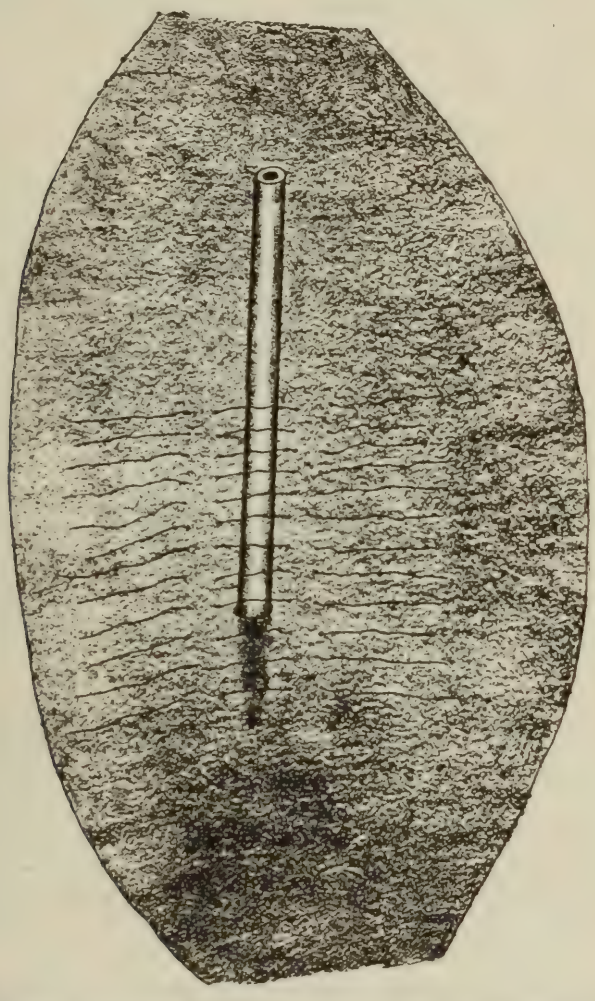


FIG. 1.—Witzel's method for Gastrostomy, showing wall of stomach embedding tube obliquely therein.—*Keen.*

stomach seized and brought out through an opening made in eighth intercostal space.

Method of Frank (Meyer, *Annals of Surgery*): An incision parallel to costal margins. Stomach drawn through incision and

a cone of one and a half inches of anterior wall is held outside, and in front of wound, with one or two silk sutures; the face of the cone is lined with peritoneum all around, and thus the peritoneal cavity is closed. A second incision about the border of ribs is made through the skin only, and the bridge of skin between the incisions is then bluntly dissected through, and the cone of stomach stitched in the second incision and opened so as to admit of a good-sized tube.

Method of Witzel (Keen, *Annals of Surgery*): The cavity is opened by the ordinary incision, the stomach drawn out and

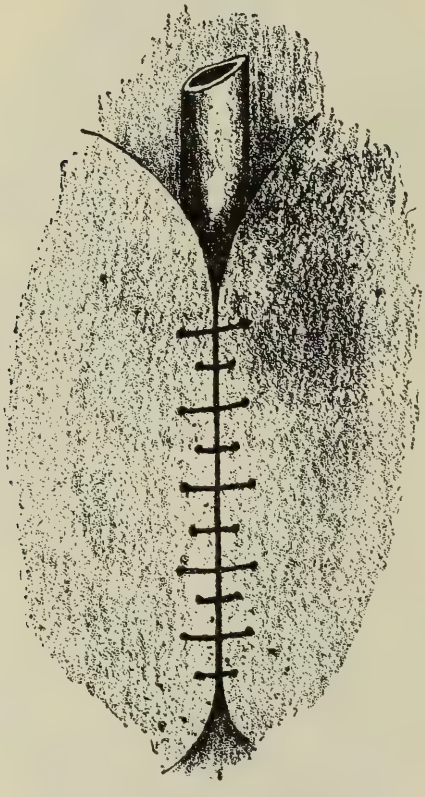


Fig. 2.—Sutures tied completely embedding tube for some distance.—*Keen.*

opened by a small incision and a rubber tube is introduced, then the gastric end is buried by two rows of Lembert sutures. The free end of the tube is brought out of the abdominal wound and fastened and allowed to remain or removed, as demanded. As Keen says, the anchoring of the stomach to abdominal incision should be thoroughly done to avoid the danger of seepage in the first few hours.

The treatment of cicatricial stenosis of the esophagus is plainly a choice between bougies and gastrostomy, and when feasible, after the latter operation, retrograde divulsion may be practiced.

Esophagotomy, and combined esophagotomy, being so uncertain and attended with so much danger, has been almost abandoned in stricture of the esophagus. Gross thus sums up the treatment of stricture by esophagotomy: "It certainly can not be said that a permanent opening in the neck is preferable to one in the stomach, while the gloomy record of death in every case in which it has been performed offers little encouragement for repetition. The treatment by tubes and bougies in the early stage of stricture may possibly be considered the safest measure. It is at best only palliative, and confines the patient ever afterward to a life the burden of which is an onerous one, being compelled to have the bougie regularly passed to prevent starvation." But the question arises here, will the passage of the tube or bougie accomplish dilatation and maintain it? If we review the clinical histories of these cases, we find that it has been a miserable failure, and that, where death has not removed our patients, gastrostomy has been done at last in order to mitigate the miseries of death by starvation. My observation in two cases of esophageal stricture bears me out in the above assertion. In both cases bougies were faithfully persisted in with no benefit. Gastrostomy had to be resorted to, and in one case death was evidently the result of delay.

In stricture where the caliber is so small that only semi-solids pass, the esophagus becomes dilated above the coarctation. The tortuosity of its course, the softened esophageal walls and ulceration make the passage of bougies an element of danger not to be disregarded. When bougies have been passed in the early history of the case without resistance, they should be withheld as soon as the narrowing goes so far as to cause resistance, for this is a warning that the parts need rest, not only from the irritation of food, but the overzealous surgeon. Gross, in speaking of the treatment of esophageal stricture, says: "It (gastrostomy) is less fatal and prolongs life longer than any other operation for fibrous stricture. It does away with the passage of instruments and the risks of laceration and division of the esophagus, with the

consequent danger from hemorrhage, emphysema, peri-esophageal, mediastinal and pleuritic abscesses. In view of these facts, opening of the stomach must be regarded as the best and safest operation in cicatricial stricture; that the dangers in these cases are starvation and irritation from the passage of bougies, and that gastrostomy allays not only the pangs of thirst and hunger, but keeps the inflamed parts at rest from the contact of food and bougies which only increase the swelling and spasm. Moreover it prevents the perforation of softened coats of the gullet."

In reviewing the history of this case, several interesting features are worthy of notice: (1) The ease with which fluids passed in a very short time after the completion of the first stage of the operation, which was probably due to the traction upon the stomach and esophagus, causing a straightening of the strictured portion of the gullet. (2) Rapid improvement that took place when she was allowed to chew her food and wash it into her stomach with fluids (milk and water). I am aware that the experiment of Hanford does not bear me out in this statement; but, nevertheless, her rapid improvement in strength and taking on of flesh was three-fold greater after this method of feeding was adopted. (3) That after feeding through a tube for the period of two and a half years, the stricture without subsequent dilatation has become pervious, and she is able, at the end of four and a half years, to eat the ordinary diet of her home. The last point will seem, to some, no doubt, as extravagant, but as the case has been under my observation for a period of nearly six years, and I have myself so often tested her and have shown her to many of my colleagues in order that they could test the correctness of my observation, and on only one occasion did I ever endeavor to pass a bougie, which was unsuccessful on account of her struggling and fighting, and I was content to allow her to go with the gastric fistula for life, expecting nothing from the rest to the stricture; but rest obtained here for so long a time has given possibly a cure for all practical purposes, and I believe that rest has here, like perineal section in stricture of urethra, caused the parts to become fallow.

In conclusion, I believe that it would be best in fibrous stricture of the esophagus, so long as a small amount of solids can be

swallowed, that the bougie becomes of doubtful benefit, and as it is not free from great irritation and danger, it should be withheld, and that a gastrostomy should not be delayed beyond the period when obstruction to solid food is complete. As gastrostomy is an easy and safe operation, offering the only permanent benefit, we would do well to follow the suggestion of Madyl, that in children who have swallowed corrosive fluids and substances it would be proper to propose an immediate gastrostomy.

LOUISVILLE.

DILLARD, JOHN: TREATMENT OF APPENDICITIS. (*Virginia Medical Monthly.*)

The treatment of appendicitis is as yet a matter of controversy. During the incipient stage saline cathartics, preferably the sulphate of magnesia, should be freely given, and at such intervals as to secure an early evacuation from the bowels, and in this manner remove the fecal accumulation in the cecum, which is commonly present. Hot water enemata should be given at least twice a day, if not too fatiguing to the patient. As soon as the bowels have moved freely, morphine should be given by subcutaneous injection, with a view of relieving pain and securing rest for the inflamed parts. Externally hot flaxseed-meal poultices and the use of turpentine may be used to allay pain, and are thought to favor a *plastic* peritonitis. Cathartics are contra-indicated except during the incipient stage; and, until the danger of perforation of the bowel has passed, liquid food only is to be given, preferably milk.

In *recurring appendicitis* I believe in the non-operative treatment, trusting to rest, morphine, and diet, combined with the judicious use of saline cathartics and enemata, to bring about resolution, in the hope that the existing attack will be the last.

An operation ought not to be thought of during the first few days; but as soon as there is *certainty* of the *existence* of an *abscess*, or of a *perforating* or an *ulcerative appendicitis*, no time should be lost in operating. The operation should be done under the most scrupulous antiseptic care, and the particular form of operation had better be left to the judgment of the individual operator.

Society Reports.

LOUISVILLE CLINICAL SOCIETY.*

Stated Meeting, Jan. 30, 1894, Dr. Geo. W. Griffiths, President, in the chair.

CASE OF ACCIDENTAL HERNIA.

Dr. P. Guntermann: The case that I am going to report is one which is very peculiar. It shows how quickly a person may be taken deathly sick; it shows also, if the nature of the trouble is not recognized, how seriously it may reflect upon the character of the attending physician. I was called about a week ago, at midnight, to see a young man, seventeen years of age, who was reported to be suffering from "cramp of the stomach." When I saw the patient I learned that he had recently gone through an attack of typhoid fever, making a very slow and tedious recovery. He had finally recovered, and for a few weeks had been in ordinarily good health. The evening I was called he had eaten a hearty supper; he attended school that night, and came home feeling perfectly well. He went to bed, and soon afterward was taken with violent pain in the stomach; directly he began to vomit and purge. His people, thinking it was an ordinary attack of something like cholera morbus, made hot applications, gave him hot whisky, etc. He continued to grow worse, and at 12 o'clock I was called in. I found him suffering with intense pain, which he located at about the pit of the stomach. I asked him if he had a rupture or ever had one, and he said no. I thought my first business was to relieve his intense sufferings. He had vomited a great deal and purged several times, so that the stomach and bowels must have been well emptied, and I did not think it necessary to relieve him in that way. I gave him a hypodermatic injection of $\frac{1}{4}$ grain of morphine with $\frac{1}{150}$ grain of atropine, and then made a very careful examination of his abdomen, but could discover nothing wrong. I then sat down to write a prescription, and while doing this he commenced vomiting again, and had a frightful retching attack. When this was over he said,

*Stenographically reported for MATHEWS' MEDICAL QUARTERLY by C. C. Mapes.

"Oh, doctor, there is a bone coming out of my side." I went to him and found in the left inguinal space a rupture as large as my fist. With some little difficulty it was reduced, and the pain subsided. With the reduction of the hernia not only did pain subside in that location, but there was also entire disappearance of pain about the stomach and the other symptoms. I thought at the time that possibly the vomiting and the diarrhea were induced by a partial rupture, that the bowel had entered the internal ring, then during the last effort of vomiting it had made its exit, and after it was reduced every symptom of vomiting and purging subsided. The next day I sent the patient to a truss-maker to have a truss adjusted, and he has not had an untoward symptom since.

I want to say that if I had left the patient perhaps two minutes sooner, if the pain had not been very severe, if he had not noticed the rupture protruding at the time, by the next morning it might have developed into a very serious case of rupture, requiring an operation or some other radical measure, and the result might have been a serious reflection upon my diagnosis of his condition.

DISCUSSION.

Dr. W. H. Wathen: Had the patient ever observed any indications of hernia preceding this attack?

Dr. Guntermann: There was not the slightest sign of a hernia until the last violent attack of retching, when it simply popped out.

Dr. Wathen: The case is very interesting, and it is now easy to understand what caused the vomiting and diarrhea. A part of the bowel had become constricted in the internal ring, causing these troubles which the doctor has described. Such symptoms are common in hernial protrusions. The strain produced by retching forced more of the bowel into the sac and dilated it to such extent as to make it perceptible both to the patient and physician; but I am inclined to the opinion that this man, if the case could be looked into carefully, had a hernia before, for the reason that the sac would have been so small that I do not think it could have been enlarged so suddenly to the extent Dr. Guntermann states. We often fail to get the accurate history of troubles of this sort from patients.

Dr. J. W. Irwin: It seems to me that the pain, vomiting, and diarrhea were all due to irritation of the bowels, and that it was a hernia from the beginning. I do not see any positive reason why the first rupture may not be large. Generally speaking they are not large, but I have seen some ruptures with history pointing clearly to that condition that were as large as a man's fist at first. But Dr. Guntermann's report of the case shows how careful we should be in diagnosticating the cause of pain in the bowels and vomiting in some cases.

DISCUSSION OF DR. KRIM'S PAPER. (See page 246.)

Dr. Irwin: The case detailed by Dr. Krim is an interesting one, and if a microscopical examination had been made it would have been still more interesting. The diagnosis in the main was correct, but the treatment of the case was less judicious in that solid food was resumed by the patient too soon. The cause of the ulcer seems to have been malignant disease of the stomach, and that was possibly the cause of the narrowing of the pylorus. It has been my experience that gastric ulcers, even when not complicated by malignant growths or malignant formations, do not heal in three weeks or three months, that it takes a much longer time. When I have seen such cases, and I have not seen a great many, I have advised the patients to remain under treatment, and very little treatment at that, other than a regulation of the diet, clothing, attention to their general environments, etc., for a period of at least eighteen months before what would be called a permanent cure of these disorders can be affected.

A patient having a simple gastric ulcer came under my care six or eight years ago. The ulcer had been in existence then three years, but was not diagnosticated until after I saw the case. The patient, a lady, was very much emaciated and feeble. I sent her to the Norton Infirmary, where she remained six weeks. Her diet consisted of very limited quanties of milk and cream. A satisfactory diagnosis of the case was established, and she was put on the way toward recovery. When she came under my care she had frequent small hemorrhages; every time she partook of solid food it was ejected, mixed with blood. The blood vomited was usually darkened by the action of the gastric juice. From the time she began to use the cream diet she had no more hemor-

rhages, and in the six weeks she remained in the infirmary she gained six pounds in weight. I advised that she continue the use of the milk and cream diet, the quantity to be gradually increased until it reached three and a half quarts of milk per day; I suggested that to this quantity of milk she might add one pint of cream. She followed the advice given her for eight months, and did not depart from the instructions to avoid taking any solid food. At the end of that time a relative visited the family and persuaded her that dieting was all nonsense and that she was starving herself to death, although she had then gained eighteen pounds in weight. This relative urged her to partake of the elaborate dinner that had been served in his honor, and she did so. In less than a half hour after eating she became nauseated and vomited the food and about a pint of blood. She was greatly prostrated, as a great deal of blood passed from the stomach into the intestines, as was shown by a subsequent evacuation of the bowels. She came to Louisville on the following day and reported what she had done. I advised that she continue the milk diet. Once, about six months afterward, she ate two crackers, which was followed by vomiting mixed with blood. She then concluded that she would not again use any thing but milk. While using milk and cream she had no vomiting at all. I gave her no medicine of any kind. The bowels became constipated by the use of the milk, and this condition was relieved by large enemata of tepid water. She continued the milk diet in all for eighteen months; I then advised her to take very small quantities of baker's bread to begin with, gradually increasing the quantity, still keeping up the use of milk and cream. She had no more vomiting and no more pain after the use of food. The regular diet of mixed food, such as she had been in the habit of using before, was gradually resumed, and there has been no return of the gastric ulcer in six or seven years. I heard from her a day or two ago; she is very strong and well and has gained forty-three pounds in weight from the time she first came under my care.

This case simply illustrates all the other cases of gastric ulcer pure and simple I have ever seen. I have not seen a case of gastric ulcer to get well in so short a time as three weeks or three months. If I understood the essayist correctly, after three weeks'

treatment he allowed his patient to take solid food. The point I want to make is, that if it was a gastric ulcer pure and simple the patient was ordered to resume solid food to soon; as it was it did not make much difference, as the trouble was malignant and not a simple ulcer. Every case that I have seen unattended by malignancy I have always considered it wise to keep under dietetic measures for about eighteen months before I could hope for a permanent cure.

Dr. Guntermann: I have seen several cases which I thought were gastric ulcer; some of them died in the course of due time, and two of them recovered. These two cases I treated by rectal feeding altogether for quite a while, then commenced gradually with liquid foods. I first gave milk diluted with lime-water, making it as alkaline as possible. I gave no medicine to speak of; some morphine was given hypodermatically for the relief of pain, and to assist the healing process I have given lime-water and carbolic acid, which I regard as one of the best anti-emetic remedies that can be used.

I had one case that I diagnosticated as gastric ulcer, and treated for a while; the man gained in weight; he had become strong, was able to follow his occupation, and my visits ceased. After a few months I was called to see him at his home. He was then quite ill; he vomited all the food taken into the stomach, and had several times vomited blood. He had intermittent pain, not the continuous sharp pain that usually attends gastric ulcers. I then became a little dubious as to the nature of the trouble. Vomiting and pain continued, and in the course of time he died. I had an opportunity to make a *post-mortem* examination, and found the pylorus completely closed with an indurated mass as large as a child's head.

I do not think dilatation of the stomach is usually present in gastric ulcers; I do not believe it is according to the teaching of the best authorities to see it large.

Dr. T. P. Satterwhite: The foregoing remarks recall to mind two cases which occurred in my practice several years ago. The first was a German lady. When I saw her she was greatly emaciated; had all the appearance of cancerous cachexia; was unable to retain food, but there was no vomiting of blood. She was under my care for twelve months. I put her upon equal portions

of milk and Carlsbad water, and she was entirely relieved with that treatment alone. When the Carlsbad would act too freely we substituted Vichy. She grew to be as stout as she ever was, weighing about one hundred and sixty pounds.

The other case was a man who was treated in the same way at the Sts. Mary and Elizabeth Infirmary; he gained some flesh, and was sufficiently improved to be sent home. He died some time afterward, however, and, like the case reported by Dr. Guntermann, *post-mortem* examination revealed a cancerous condition of the pylorus.

Dr. J. M. Krim: The case referred to in my paper did not get well in three weeks by any means; I kept him on a liquid diet for three weeks, then allowed him a small quantity of solid food, which did not appear to give him any discomfort. The stomach-washing with chloroform and water was carefully carried out according to the idea of Stepps, who has had quite an extensive experience in the treatment of gastric ulcer. The chloroform and bismuth mixture is also recommended by Stepps; he claims that healing of the ulcer takes place much more rapidly under treatment with this mixture than any thing else he has tried. The patient was under my care about three months, then he moved to the country; he gained in flesh while he was under treatment. I washed the stomach for about four weeks, twice a day for the first week, and after that once a day. As solid food in very limited quantities gave him no inconvenience, it was allowed, but the milk diet was continued.

Dr. Irwin evidently did not understand me correctly. I stated in my paper that the patient first commenced to complain in January, 1892, and consulted me in April of the same year. He was under my care about three months, then removed to the country, and I saw no more of him until August, 1893, when he simply consulted me in reference to the advisability of his taking a trip abroad. I did not prescribe for him at this time, and he received no treatment after he returned from Germany. I was called hurriedly to see the patient early in December, but he died before I reached him.

I firmly believe that the first trouble was simple gastric ulcer, which was entirely relieved by the treatment, as stated in my report. But when he consulted me on the second occasion (in

August, 1893), at the time he went to Europe, I believe the condition was cancerous. In other words, the primary condition was that of simple ulcer, and the cancerous trouble, which developed later, was secondary.

No history was obtained prior to the first appearance of pain (January, 1892,) except that the man had always been in perfectly good health.

Stated Meeting, Feb. 27, 1894, Dr. Geo. W. Griffiths, President, in the chair.*

DISCUSSION OF DR. MATHEWS' PAPER. (See page 210.)

Dr. J. W. Irwin: I rise more particularly to express my commendation of the most excellent paper read by Dr. Mathews. This is certainly a live subject, and one of the greatest importance, because nearly every physician meets with such cases. The description given by the essayist is very accurate and to the point.

There is one point in regard to rectal abscess that he did not emphasize, that is, the use of poultices. He mentioned that poultices should not be used after incising a rectal abscess; I think we should go further than this and say that poultices should never be used in the treatment of this condition either before or after evacuating the abscess.

Dr. W. O. Roberts: I think most surgeons of the present day will agree in the main with what Dr. Mathews says in his paper. There is no question but that most of the bad results in cases of ischio-rectal abscess are due to bad treatment. By bad treatment I mean just exactly what Dr. Mathews has stated—either allowing the abscess to break or making an insufficient opening for drainage. I believe that in ischio-rectal abscesses the pus forms within forty-eight or seventy-two hours after the first symptoms develop, and frequently there is a large collection of pus in the cavity when no fluctuation can be discovered by examination from the outside. Like Dr. Mathews, I do not wait for fluctuation to be present before opening the abscess. I also make a large opening, one which will admit with perfect ease the introduction of my finger, and after evacuating the abscess I carry my finger into the cavity to divide any partitions that may be present. I think by this method we will certainly

*Stenographically reported for MATHEWS' MEDICAL QUARTERLY by C. C. Mapes.

confine the fistula which follows to one tract. The cause of so many fistulæ I believe to be due to the fact that the opening is too small for evacuation of the pus.

My treatment of such cases is about like that advised by Dr. Mathews: a free incision, washing out with mercurial solution (I prefer that to peroxide of hydrogen), packing the cavity lightly with iodoform gauze, then applying over the region of the abscess an *abundance* of gauze, and over that cotton. I do not think cotton amounts to any thing in these cases except as a protection to the gauze. I change the dressing daily until inflammation has subsided, continuing to use iodoform gauze. After inflammation has subsided and the cavity has contracted I cease using the gauze and employ in its stead a piece of rubber tissue, simply to keep the external wound open until healing takes place behind. I think in the great majority of these cases there is an internal opening, and where this exists I do not believe it will heal till after an operation for the fistula has been performed. Sometimes we have a recurrence of the abscess after a lapse of months, and in these cases recurrence frequently takes place without any apparent cause, such as injury, exposure to cold, etc. I have a case under observation now in which the abscess developed a year ago last September. A gentleman, otherwise in good health, commenced feeling very sore and uncomfortable about the region of the anus; left here to visit his wife, who was spending the summer at a sea-side resort. Reaching his destination, he had a fever and considerable tenderness about the anal region. He consulted one of the leading surgeons of the East who happened to be at the summer resort at the time, and to my very great surprise exactly the treatment spoken of by Dr. Mathews was carried out, that is, poultices, etc., which was kept up for several days; then after the man had had a few chills and sweats the abscess was opened, not by a very large opening, and the man was in a very critical condition for some days. He returned to Louisville about two weeks after the first operation was performed, and I found a considerable boggy condition about the buttocks, the opening being so small that the abscess did not drain thoroughly. I made a free cut, large enough to introduce my two fingers, and by treating as I have described the abscess cavity gradually closed. I think it was fully a month after he

returned before the wound entirely healed and he was considered well. He had no further trouble until two weeks ago, when he commenced complaining of soreness about the same region; I saw him in forty-eight hours after the first symptoms developed, there was a boggy condition about the region of the old cicatrix, but no fluctuation. I was satisfied pus existed from the local evidences of inflammation and general fever that he had, so I immediately made a free incision, and quite a large quantity of pus escaped. Instead of having an increase of fever following the operation, as he did in the first instance, it subsided immediately. He has gone along without an untoward symptom, the abscess cavity has now contracted to a very small fistulous tract, and while I have been unable as yet to discover any internal opening I still believe one exists. My experience with these internal openings is that they are nearly *always* situated just within the anus. I have never met with a case in which the opening was as high up in the bowel as described by Dr. Mathews, though, of course, they may exist, and have been frequently reported. I do not believe it is a good thing to keep gauze in the abscess after it has contracted down to a very narrow fistulous tract.

Dr. Irwin: What per cent. of the cases bear out the suggestion of Sir Benj. Brodie, that all such disorders (fistula in ano) are due to a tuberculous diathesis?

Dr. Roberts: While we do meet with a great many cases of ischio-rectal abscess resulting from tuberculosis, I think we meet with fully as many due to other causes.

Dr. T. P. Satterwhite: I believe that a large per cent. of rectal abscesses are due to microscopical openings in the bowel, the juices of the bowel permeating into the cellular tissue, causing ulceration. There is one point in connection with Dr. Mathews' paper that I would like for him to explain. He said in case of the young lady there was one opening which it became necessary to close, and it had to be very carefully done in order to preserve the sphincter muscle; did he operate upon both sides at once?

Dr. J. M. Krim: This brings up the question as to whether it is advisable to operate upon these cases when there is a tuberculous diathesis. I have seen a few cases of rectal abscess, and remember one that Dr. Mathews operated upon who had tuber-

cular trouble, still it gave him immediate relief. However, the patient finally succumbed to tuberculosis.

Dr. J. M. Mathews: In closing the discussion: To begin with I am very glad that Dr. Irwin sanctions the advice not to use poultices, especially after an opening is made. We all know that poultices in surgery have been relegated to a non-existence. I am glad to know, also, that Dr. Roberts, the eminent surgeon that he is, agrees with me in the main, especially in the treatment of rectal abscesses; as a surgeon he has seen so many of these cases of fistula that have, as stated in my paper, become invalids for life; men and women who are not able to pursue the ordinary avocations of life, the vast majority, if not every one of them, due to the bad management of the original abscess by the physician. I can not agree with Dr. Roberts in one proposition, that the majority of fistulæ in ano, especially those he describes originating in the ischio-rectal fossæ, have an internal opening into the bowel. Such abscesses usually originate from trauma from some outside causes, and that is the very point I tried to make explicit in my paper, that if we could reach the abscess and evacuate it before its ravages were advanced to the point of perforation of the bowel that we would avoid not only an internal fistula but any fistula at all. I know that I have operated on scores of cases of fistulæ that never had an internal opening, that I never penetrated the bowel at all; I have gone into both buttocks and into the fossæ, made large wounds, dividing these different cavities such as he speaks of, etc., and cured my patient without ever going into the bowel. Indeed, admitting that there might be an internal opening, I believe by such surgery as I have indicated, going down and making a free division, using the peroxide solution, or solution bichlor. hydrg., the inflammatory deposit will be sufficient to close it, if the operation is done in the early stage before any especial pathological changes have taken place.

Dr. Satterwhite states that he believes the majority of fistulæ begin as an ulceration in the rectum which extends into the fossæ or structures outside. I can not hold to that belief, nor do I believe that a heavy percentage of fistulæ have an internal opening at all. It is not necessary for me to state my views about the operation for fistula and the finding of an internal opening;

the majority of books say it should be sought for and found before you do an operation. I have differed from these distinguished authorities by saying that when I do an operation I will find the internal opening, that I will never seek for it at all before operating; but in the majority of cases it does not exist.

Dr. Krim asks concerning the propriety of operating upon tuberculous patients who have fistulæ. I wish to say this: That, considering the latter-day views of this subject, we are constrained to believe that a man may have tuberculous tissue in one portion of the body and not in another. A man may have a tuberculous joint and yet not have phthisis; he may have a tuberculous rectum and yet not have consumption of the lung. Therefore, if there is any one thing which is taught plainly to-day in regard to tuberculosis, it is that just so soon as you detect it, that tissue must be removed, because from a small local spot general infection may take place. A man might have a tuberculous condition of a joint, and from that he could have general infection or phthisis. If a man has a tuberculous ulcer in the rectum it is the duty of the surgeon, as soon as he detects it, to curette or cut the whole thing out; therefore, in answer to Dr. Krim's question, I will say that they demand an operation much quicker than ordinary cases of fistula, much more than ordinary cases of ulceration of the bowel. The moment you decide it is tuberculous you must curette or by other means get rid of that tissue to save the patient from general infection. Now, as Dr. Krim states, here is a case that takes us back to the old doctrine of Brodie, spoken of by Dr. Irwin: If a man happens to have consumption (or phthisis, if you please), and should develop fistula, they said it was because he had consumption, and therefore they let him go on suffering the agonizing pain of fistula in ano because they regarded it as an escape or an outlet for this condition of the lung. The case Dr. Krim refers to clearly disproves the old doctrine; we take a man who is suffering from a tuberculous abscess or fistula and we entirely cure him; he gets rid of the rectal trouble, but has general tuberculosis at the time that we operate; he is relieved of the local trouble, but after a while dies, because he has consumption. Now, the older authorities say that this man died because we did the operation, because we cured the fistula. Therefore, I believe, if for nothing else, you relieve a

man from the local distress he is suffering, and he should be operated upon—certainly, if the man has a tuberculous ulcer, fistula, etc., it should be operated on at once, and no half measures will do. The same as you would remove a cancerous growth you must remove the tuberculous tissue.

Referring further to the remarks made by Dr. Satterwhite, this young lady, as you will understand, had both buttocks undermined; they were not little channels, little sinuses—you could run your finger out into each buttock; there were numerous cavities with bridges across, etc. Her sphincter muscle being the objective point, I wanted to preserve it in order to prevent this woman having incontinence of feces. I operated on only one side at a time. I say I had to divide her sphincter muscle on one side; this became necessary owing to the extent of the fistulous tracts. The pathological condition was two years old, consequently I divided the muscle freely on one side, followed up the different sinuses, channels, and cavities, allowing the patient to rest three weeks, then operated on the other side, opening and curetting freely, but did not go into the bowel. I did not cut into the bowel because I did not find an internal opening; even had there been one, I am persuaded that the inflammatory deposits excited by the incision would have been sufficient to close the opening. The one important point was to preserve the sphincter muscle so as not to put this woman in a condition of incontinence of feces. By simply the division of one side I know she will not have incontinence.

LOUISVILLE MEDICO-CHIRURGICAL SOCIETY.*

Stated Meeting, January 5, 1894.

FOREIGN BODIES IN INTESTINAL TRACT.

Dr. J. W. Irwin: A lady recently came under my care who had been suffering for seventeen years with some affection of the bowels. The trouble was not diarrhea; it was not constipation; but now and then she had sharp, shooting pains in the colon, especially about the sigmoid flexure. It was necessary for her

*Stenographically reported for MATHEWS' MEDICAL QUARTERLY by C. C. Mapes.

to take opiates for the relief of pain before she could get any rest. When she came under my observation the pain had shifted, being lower down in the rectum. I made an examination of the rectum, having introduced a speculum, and found a safety-pin two and one quarter inches in length, both ends closed in the bowel, corroded by the action of the intestinal juices, etc. The only recollection she had of any circumstance that could possibly have led to the swallowing of a safety-pin was seventeen years ago, when her last child was small—she had been in the habit of putting pins into her mouth, but did not know how or when she had swallowed one.

DISCUSSION.

Dr. W. O. Roberts: How long since the pin was removed, and has there been any trouble since?

Dr. Irwin: The pin was removed three days ago; there has been no pain since, and the patient sleeps well, requiring no anodyne, and there seems to be no evidence of further trouble.

Dr. Roberts: Dr. Vance assisted me some time ago in operating upon a girl who had swallowed a pin. Ten days afterward she began to suffer pain in the right iliac region, and by deep palpation a tumor was discovered. At first it seemed to be not quite as large as a hen's egg. The patient was taken to the Norton Infirmary; we watched her very carefully, had the stools examined, etc. She became very much constipated; the pin never made its appearance, but the tumor steadily increased in size, so that at the time of the operation it was quite as large as a duck's egg. We took it for granted that the tumor was in the cecum, or possibly in the vermiform appendix and surrounding tissues. We cut down upon it, and found the end of the colon very much inflamed and thickened; we did not open it, however. The wound was closed, and there has been no further trouble. The girl after that had a number of very copious evacuations, and one day, I think after being constipated for four days, she had a dozen very large watery evacuations; the pin did not pass, but the tumor diminished in size, and the patient was finally discharged from the infirmary with the tumor very much smaller than a hen's egg. There has been no trouble since.

Dr. Irwin: In regard to appendicitis, foreign bodies having been found in the appendix, thought to be the cause of ulcera-

tion, etc., experience in the dissecting-room goes to show that foreign bodies are frequently found in the appendix, also particles of hardened fecal matter, and yet no evidence of inflammation had been observed during life or after death. Furthermore, many of these cases are relieved by medical treatment, and if there is a foreign body in the appendix it is reasonable to suppose it remains there, yet the patients get well. I believe that foreign bodies in the appendix have nothing to do with appendicitis. The vast majority of cases of appendicitis I believe to be due to a catarrhal cause, and not to the presence of foreign bodies. A few cases may be due to traumatism. I think experience of the future will show that foreign bodies have nothing to do with that disease.

Dr. C. Skinner: Last week a young man, twenty-two years of age, consulted me, complaining of pain in the region of the gall-bladder. He is a very healthy looking man, dark complexioned, the son of a prominent druggist. The history is, that when three years of age, while playing with his little sister, they had between them a gold crucifix probably about two inches in length, the cross piece being about an inch long, and upon which there was an image, all of solid gold. This little fellow in order to keep his sister from having the crucifix put it in his mouth, and as a matter of course it was swallowed. The stools were watched for months, he was given various purgatives which caused the bowels to move copiously, but the crucifix never passed. In the last three or four years he has been suffering with pain just about where you would expect to find the gall-bladder, possibly a little behind it and to the right. He says the sensation is identical with what can be produced by making moderate pressure with the finger upon the surface. Sometimes pain is greater than at others, and the feeling is from within outward. There is no pain in the muscles or skin. He has no symptoms referable to the liver; no dysentery, and nothing that would indicate obstruction of the gall-bladder. There has never been jaundice, nor gall-stone colic; digestion perfect, and no constitutional manifestation of liver trouble. By careful and deep palpation the liver seems to be somewhat enlarged.

The question naturally arises, if the cross has never gone through, has it become fastened in the location of the colon,

fixed by adhesions, etc., and what procedure is indicated? I would like for some of the Fellows to give an opinion as to what should be done; would exploratory incision be advisable under the circumstances?

Dr. A. M. Vance: I saw a report some time ago by a French surgeon in which he detailed a number of cases similar to the one reported by Dr. Skinner, together with one he had operated upon, where a silver fork had acted about like this gold cross has, causing about the same line of symptoms. It was removed from a mass of lymph, having forced its way through the bowel into the peritoneal structures, and fastened there by inflammatory processes. It was taken from somewhere near the cecum. There are a great many such cases on record, where people have swallowed all manner of things, hair-pins, jack-knives, etc., which have been removed a long time afterward.

Dr. A. M. Cartledge: Dr. Skinner's case is something like one I reported recently, where I did a pyloroplasty upon a patient who had swallowed a pin twelve years before, which had evidently been lodged at the pylorus during all that time, causing cicatricial stenosis. I believe, if Dr. Skinner would anesthetize his patient, by deep palpation he might be able to locate the foreign body more definitely. If it could be located in this way, then I think an incision should be made.

Dr. Roberts: It seems to me that an exploratory operation would be perfectly justifiable in the case.

Dr. Skinner: The patient is willing to undergo any operation that may seem necessary. I told him I would watch it very carefully for a while, and if he continued to suffer would make an exploratory incision in order to ascertain the exact nature of the trouble.

Stated Meeting, February, 1894.

A CONTRIBUTION TO THE PATHOLOGY OF APPENDICITIS.

Dr. A. M. Cartledge: The members of this Society, and in fact the profession at large, should be interested at the present time in an improved classification of appendicitis. Unfortunately every one who has attempted to classify this disease has started as a rule upon a mixed basis. First we thought the

classification should be based upon the anatomical conditions and situations, next upon the clinical phenomena presented, and finally we commenced basing a classification upon the pathology of the disease, which is the only correct one. I have tried time and again to formulate something that would be regarded as satisfactory, at least to myself, but it is a very difficult subject. We find most authorities on the subject still speaking of the disease as catarrhal, ulcerative, perforative, etc. There is only one way that this subject can be properly elucidated, and that is to save enough specimens and have them thoroughly and carefully examined. The first thought would be that this has already been done, as has been done in a large number of other intra-peritoneal lesions. However, such is not the case.

Even at the present day we find men talking and writing about "catarrhal appendicitis." I have taken the position, as some of you know, so far as surgery is concerned, that there is no such thing as catarrhal appendicitis. It is impossible for me to see how a catarrhal inflammation of the appendix could produce symptoms that would even enlist the attention of the physician, much less the surgeon. I do not deny that a catarrhal condition of the appendix may exist, the same as we have catarrh of the colon, cecum, etc.; but I do claim that all lesions sufficiently well marked to be denominated "appendicitis" are primarily ulcerative or perforative in type, and we might as well eliminate the term "catarrhal appendicitis" from surgery.

What has been called catarrhal appendicitis I am quite sure is ulcerative appendicitis that has led to stenosis at some portion of the lumen of the appendix. I believe, if you will slit up appendices removed, a great majority of them will be found constricted at some point. The history of these cases bears this out. For instance, we see a man who has the so-called catarrhal type of appendicitis, the temperature reaches 101° F., but does not get higher than this point, and he recovers. He has a half dozen such attacks and recovers. In the next attack he is suddenly seized with severe pain—in an hour he is in collapse; the surgeon is called at once, and operates, finding the appendix has ruptured, and pus in the cavity; rupture has taken place before nature has had time to throw out a wall of lymph as a protection against invasion of the peritoneal cavity. My idea is that most of such

cases result from stricture, and stricture can only come from cicatricial tissue, resulting from a previous suppurative or ulcerative condition. It is perfectly plain, from the anatomy of the appendix, that a portion of the contents of the cecum may be forced into it, and it may also be discharged again into the cecum; but the tendency would be for it to remain in the appendix, owing to gravitation. Fecal matter does not normally occupy the appendix, its only contents being a mucous secretion, and I take it, when fecal matter is found, it is *prima facie* evidence that the appendix or the door to its entrance is diseased. In the majority of cases of ulcerative, non-perforative or tuberculous inflammative type—the so-called catarrhal appendicitis—no special changes are reported to have taken place in the appendix upon examination after removal. If these appendices are examined more closely, stricture, usually near the base, will be discovered, and as a result we have distal distension, an appendix that becomes filled up at times, probably containing pus-forming organisms, in other cases only the colon bacillus. Continued contraction of the stricture eventually leads to one of two pathological terminations, either complete stenosis with distal distension and rupture, or retention with infection and general septic inflammation of the appendix, leading to necrosis and perforation.

This first specimen shown represents the type that we usually find, a rupture of a generally inflamed appendix surrounded with abundant fibrinous deposit, the so-called perforative type with a large abscess.

The next specimen I show you illustrates the extreme type, operation delayed; small and poorly circumscribed abscess; scarcely any appendix found, simply a little fringe of gangrenous tissue, evidently perforated in two or three places. Now, in this type you observe a case which was probably due to an intense infection leading to rapid necrosis, the result of bacterial invasion and ischemia.

The third specimen is one of so-called catarrhal appendicitis. The patient from whom this specimen was removed was sent to Louisville by a physician in the country with a letter addressed "To Whom It May Concern," stating that the young man had suffered seven attacks of undoubted appendicitis, and that he thought the appendix ought to be removed. He had appendi-

citis early in November, so the doctor stated, a severe attack, although the young man said he was not in bed more than five days. Upon examination there was no tumor, but I thought I could detect in the region of the appendix a little thickening. As the letter from his physician was so clear that there could be no mistake about the diagnosis, I went ahead and operated to-day, and found the appendix in the condition which you see. The appendix was coiled up and adherent behind the cecum, and distended with liquid fecal matter and pus to about four times the size it now presents. It had never ruptured. The case was one of the character so often reported cured by the administration of large doses of opium. It is a typical case of the so-called catarrhal appendicitis of recurrent type. I have slit the appendix open in its long axis, and you see plainly about one half inch from the base a stricture, the result of cicatrization of a former ulcerative (so-called catarrhal) inflammation; beyond this the appendix is distended and in a state of quiescent inflammation. Do not such conditions urgently suggest future trouble of a graver character? Many cases of distal distension, with rupture and possibly ischemic gangrene, may result from a twisting of an otherwise normal appendix upon itself; in this way the trauma leads to perforation even where stenosis from other inflammatory causes is not present. Such a thing is quite possible, as I have observed one unmistakable case successfully operated upon by Dr. James Chenoweth of this city.

LOUISVILLE SURGICAL SOCIETY.*

Stated Meeting, January 8, 1894, Dr. A. M. Vance, President, in the chair.

Dr. Turner Anderson reported the following case: This young man, Mr. C., aged thirty-six years, has an intra-abdominal tumor which is freely movable. Three years ago he had the misfortune to be struck in the side, and since that time he has not been in very good health. From a short time after the receipt of the injury he suffered with diarrhea and distension of the abdomen. He went along following his vocation, which is that of a trainer or

*Stenographically reported for MATHEWS' MEDICAL QUARTERLY by C. C. Mapes.

superintendent of a racing stable, traveling all over the country. Some six weeks or more ago he sent for me, and I requested an examination in bed. He called my attention to this movable tumor, situated immediately in the median line between the ensiform cartilage and the umbilicus. It could be outlined more perfectly in that situation than any other point; it could be carried, however, from one side to the other. I thought I could carry it further to the right than to the left side. For some weeks prior to my seeing him, he had been unable to take any food. He had been vomiting every particle of solid food taken into the stomach. I advised him to take a liquid diet. I also advised him to consult the physician who had made a diagnosis in his case. After learning of this diagnosis he had consulted several other physicians. He is now living upon a liquid diet; for five weeks has subsisted almost entirely upon milk. A short time before I saw him he discovered the lump in the abdomen.

DISCUSSION.

Dr. E. R. Palmer: I believe this is a normal kidney, displaced by the blow, tearing it from its moorings. I could feel the hilum distinctly. It is a normal kidney in size, normal in every thing except locality—a dislocated kidney.

Dr. A. M. Cartledge: I saw the patient presented by Dr. Anderson, three weeks ago, and have known him for a long time. He has consulted several physicians in this and other cities. I made an examination and found the tumor in the abdomen, which at that time was freely movable, and about the same history was given as detailed by Dr. Anderson. I stated to the patient that he evidently had a growth within the abdominal cavity, but, like a great many other abdominal tumors, I thought the only way to settle definitely the nature of it would be to make an incision and see. To-night I made another examination of the tumor, and, like Dr. Palmer, I believe it is a dislocated kidney; I thought I could outline the kidney, and by giving the patient some pain it could be pushed back into the left side. I thought I could feel the hilum of the kidney. An abdominal incision is the only thing that will clear it up.

Dr. H. H. Grant: I can not agree with the gentlemen who have spoken in regard to the case under discussion. I feel a

growth which is not movable to my touch, but is fixed, at least it is evidently attached to the abdominal wall, and apparently on the parietal side of the omentum. It does not seem to me to be quite as large as a kidney, and it is harder. It is nothing like so movable as a dislocated kidney would be, at least it so appears to me. Although the symptoms in this case are not exactly such as would characterize malignant disease of the stomach, there is a strong suspicion in my mind that the trouble might be cancer of the pylorus pulled down in the abdomen by its weight. It might also be malignant growth of the omentum. As we all know, it is almost impossible to arrive at any thing like a conclusion in abdominal growths without exploratory incision. There would be comparatively no danger in making an incision, and I think this ought to be done before it is too late.

Dr. J. M. Mathews: I must say that there are unmistakable evidences of malignancy in this case. I examined the patient, and was not able to detect the movable tumor that the two gentlemen have spoken of. Dr. Grant says that this patient does not present the symptoms of malignancy direct; in this I think he is mistaken. The patient has lost thirty pounds in flesh; it may be said that he gains flesh occasionally; he may be gaining in flesh now, yet that does not throw any light upon the case. Many people suffering from malignant growths frequently gain flesh. In the second place he gives evidence that he can not swallow a particle of solid food; if he takes one mouthful of solid food into his stomach he is compelled to throw it up. I must say that every symptom is against enlarged or dislocated kidney.

I have a patient under observation now who has a displaced kidney, at least that was the diagnosis given by her physician. The patient is a woman in perfect health; she has never lost a pound in flesh; eats three meals a day, and there has never been any indigestion.

As regards the treatment in the case before us, if it is a dislocated kidney, the man should have the benefit of an operation, and the kidney either stitched back in place, or removed. If it be cancer, I think there are surgeons who would not only make an incision for diagnostic purposes, but also do an operation with the view of effecting a cure. Whatever the trouble may be, an

incision should certainly be made, otherwise in less than a twelve month I believe that some one will be called upon to make an autopsy for case of malignancy.

Dr. W. C. Dugan: I examined this patient as carefully as I could and failed to get the mobility of the tumor that I would expect in a movable kidney. I, too, failed to find the outline in some directions that I would expect in a kidney. The tumor seems to me to be attached to the region of the umbilicus; just what it is I would not like to say. That there is a tumor, I will agree with any one. I think exploratory incision not only indicated, but demanded in this case, and should be done without delay. It may be an omental tumor, and I think it most likely is, malignant or otherwise, or it may be a tumor of the pyloric end of the stomach. The location as mentioned by Dr. Grant is not the ideal one of pyloric tumor, but we know there may be considerable variation as to locality. The tumor seems to extend below the stomach. Of course we recognize that the stomach is any thing but a fixed organ, and may even extend as low down as the pelvis. If the man was a patient of mine I would not hesitate to open the abdomen, and on doing it would be prepared to remove the growth if found operable, or if it be a kidney to either replace or remove it, as the circumstances might indicate.

Dr. W. O. Roberts: From the hasty examination I made of the case it occurs to me that the trouble is a tumor of the mesentery; possibly it may involve the upper portion of the small intestine. I think, as Drs. Dugan and Mathews have said, that the proper procedure would be to make an exploratory incision, as it might be a tumor that could be easily removed, and there would be very little risk in the operation. From the examination I made of the tumor I should say that it is malignant. We never can tell, of course, the exact location of tumors in the abdominal cavity.

The tumor in this case, shown by Dr. Anderson, does not feel to me any thing like a kidney. I would certainly advise exploratory operation.

Dr. W. L. Rodman: I think the case is one demanding exploratory laparotomy. As to the two views that have been expressed as regards the nature of the trouble, in the first place no one has ventured an explanation as to why this man, who was struck in

the side three years ago, should only notice an enlargement six weeks ago. That, I think, is significant. No one has spoken of the fact that a floating kidney is of very exceptional occurrence in men. No one has said that when they do occur in men they are nearly always on the right side. Now, like Drs. Grant, Mathews, Dugan, and Roberts, I fail to find any great mobility of the tumor. You can not push the growth very far to either side of the median line. In the second place, it does not feel to me more than half as large as a kidney. I am very certain that I can not map out the hilum or any border of the kidney. I fail to understand how a floating kidney would cause the severe gastric symptoms manifest in this case, and I utterly fail to understand why this man should have lost as much as thirty pounds in flesh from the presence of a floating kidney. I think the case is one of tumor, probably malignant, and I am very much disposed to think it a tumor of the omentum. I have been present at four or five laparotomies for just such tumors as this, and every one turned out to be malignant disease of the omentum. Malignant growths of the omentum are common, and I think every thing in this case points more to that than a floating kidney, which is exceedingly uncommon in men. In women who have borne children floating kidney is not uncommon.

Dr. Anderson: Before saying any thing further about the case, I would like to hear from Dr. Bloom in regard to the influence upon a digestive function of a floating or movable kidney. He has recently had such a case under observation, and I hope will give us the benefit of his experience.

Dr. I. N. Bloom: The case Dr. Anderson refers to is a young lady, twenty-four years of age, who, in good health, formerly weighed about one hundred and twenty pounds, and is medium in size. I saw the case in consultation with Dr. Anderson; she had been suffering for some time from dyspeptic and occasionally dysenteric symptoms. Dr. Anderson was the first to map out a movable kidney; at times we could feel it, then again it could not be outlined. Sometimes it would require a careful and extended examination after the patient had been in bed for a day before the tumor could be recognized. This young lady suffered excessively from vomiting; no matter what kind of food was given, her stomach seemed incapable of digesting it, and she

became emaciated until her weight was eighty-five pounds. In the mean time she had consulted several other physicians who made different diagnoses from ours, but later had to acknowledge the correctness of our conclusion. Under treatment suggested by Dr. Anderson and myself there was permanent disappearance of the tumor, the vomiting ceased, and she was enabled to take and digest food of all kinds. At last accounts she was still improvoving; weight had increased to one hundred and nine pounds. In this case I am positive that the trouble was due to a floating kidney, and, as I have already indicated, the gastric symptoms were very marked. She was put upon a milk diet, but even that she was at first unable to retain. Vomiting and diarrhea were liable to come on at any time.

Dr. Cartledge: I am a little surprised that the gentlemen who have spoken are not more familiar with the gastric symptoms dependent upon movable kidney. The nausea is usually very great, sometimes amounting to almost anorexia, and the patient is absolutely unable to take food of any kind. This is one of the chief symptoms when any trouble is occasioned. I have one lady in this city under observation at the present time, who has a movable kidney, and she has become greatly emaciated, weighing probably not over seventy-five pounds. This is certainly due to the movable kidney, and most authors who have written upon the subject make that point extremely plain.

Referring to the remarks made by Dr. Rodman, I should have stated in discussing the case, that while no immediate ill effects followed the blow upon the side three years ago, yet the gastric trouble dates back to a few weeks possibly after receipt of the injury. He has been traveling about the country, following his vocation of horse trainer; a number of physicians in different parts of the country have prescribed for him, but an examination was never made until about ten weeks ago. When he was first examined and the tumor discovered, and so stated to him, he replied, "Why, that lump has been there two or three years," showing that the injury was probably the original cause of the trouble.

Dr. A. M. Vance: While I did not make a very careful examination of this patient, I do not think the tumor is a kidney. In the first place it is fixed to a certain degree, and is too hard

to be a kidney. I have never seen a movable kidney that could not be replaced in the normal position by careful manipulation, but, of course, it might not remain there. This tumor certainly is attached to something, probably the abdominal wall; it can be pushed from one side to the other, but this is probably due to the laxity of the abdominal walls, and I admit that I do not know what it is. I do not think it is possible to tell to a certainty what the nature of the growth is until the abdomen is opened. I am inclined to think it is malignant, and if not connected with the stomach, it is certainly in very close relationship and very near the stomach. I agree perfectly with the other speakers that an exploratory incision is demanded at once, and believe the growth will be found malignant.

Dr. Anderson: In closing the discussion, first of all, I wish to say that I believe the growth is malignant. I think it is connected with the stomach, with the pyloric orifice in all probability, and that part of the stomach has been drawn down from the natural position. When I first saw the patient the tumor was higher. I believe the patient himself had discovered the lump, as he called it, some time before I saw him. Now, I do not believe it is a movable kidney for this reason, it is far away from the situation in which we would expect to find a movable kidney, and we are utterly unable to replace it. While we must admit that it is possible for a movable or displaced kidney to become adherent in a new situation, yet I take it this would be an unusual condition.

Next, I do not believe it is a floating kidney, because it can not be moved freely; it is somewhat fixed, as it were. When the patient first consulted me diagnosis had been made by another physician of movable kidney, and the patient said he could replace it himself. When asked to do so, he made the attempt, and when he said it had been accomplished, I called his attention to the fact that he had simply carried the tumor down a little lower in the abdomen. I made several efforts myself under the impression that it might be a kidney, to replace it in its normal position, but of course failed. As a rule a movable kidney is easily replaced; even as we are making an examination it gets out of the way, and we are sometimes unable to find it again at that examination. That is one point which impresses me in

making a diagnosis of movable kidney. I make a distinction between *movable* and *floating* kidney, the latter as we know being congenital.

[NOTE.—On February 9th this patient was operated upon by Dr. Cartledge, an exploratory incision was done, and the growth found to be a cancer a little above the pylorus, causing almost complete obstruction. Great dilatation of the stomach was present, and the tumor had so dragged upon the pylorus that it could be pushed to almost any part of the abdomen.

The stomach was opened and the mass of cancerous material removed by a spoon, after the method of Bernays, the stenosis dilated till two fingers could be passed through. The wound in the stomach four inches long was sutured by the Czerny-Lembert method, stomach returned into the cavity and abdomen closed without drainage. Rectal alimentation resorted to for three days. At present time patient is taking liquid food by the mouth, with broths, crackers, toast, and fine chopped meat.—ED.]

THIRIAR: HERNIA. (*Le Mercedi Med.; Medical Brief; St. Louis Medical Era.*)

The method of radical cure for hernia is described by the implantation of a decalcified plate of bone. After carefully isolating the sac to above the internal ring, he then ligates and resects it. On being released the stump disappears within the abdomen. Between the peritoneum and abdominal wall a plate of decalcified bone is inserted; this is well held in place by the sutures which pass through the edges of the orifice and unite the pillars. The size of this plate is larger than that of the opening, and varies from three to five centimeters long, the same in breadth, and eight to twelve millimeters in thickness. The canal is sutured shut with catgut, and then the skin, drainage being put in if desired. The author states that he has practiced the operation twenty-five times in the past eight months, and as yet has had no relapses, and this notwithstanding he has done it in the worst of cases. In one of his earlier cases the plate was discharged in fifteen days, having been reduced about one third in size. The patient, nevertheless, was cured, and remains so. The author claims that as the plate disappears it is gradually replaced by cicatricial or strong fibrous tissue that effectually plugs the opening and prevents a recurrence.

MATHEWS' MEDICAL QUARTERLY

"ALIS VOLAT PROPRIIS."

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JOSEPH M. MATHEWS, M. D., - - - - - EDITOR AND PROPRIETOR.
HENRY E. TULEY, M. D., - - - - - ASSOCIATE EDITOR AND MANAGER.

A Journal devoted to Diseases of the Rectum, Gastro-Intestinal Disease, and Rectal and Gastro-Intestinal Surgery.

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COLOTOMY.

Perhaps the most important surgical operation that concerns the rectal surgeon is colotomy. It must be admitted that there are many points concerning its advisability that have not been settled. In the last issue of this journal appeared two articles on this subject which claimed for the operation a very wide field. To a number of propositions laid down in these articles serious objections could be preferred. Mr. Bryant, of London, has many followers in his declaration that colotomy should not be regarded as a *dernier ressort*, but would look upon the operation as the best means the surgeon has at his disposition for the relief of rectal obstruction from cancers, and every disease which is not otherwise removable. In this country we have many who agree with Wyeth, that "in stricture of the rectum, when all other measures fail, colotomy is the *last* resort." In this list can be included the names of quite a number of the most distinguished surgeons in the Union. Considering the fact that colotomy is one of the most disgusting of all surgical operations, it would be well if the surgeon would stop sufficiently long before performing it, to consider of what benefit it will be to the patient. By a number of operators it seems quite sufficient that the diagnosis of cancer be made to warrant a colotomy.

There are a number of conditions which should be carefully canvassed before any such conclusion is reached. It is argued

by some that the prime cause which justifies the operation is the relief from pain which is afforded, but it must be admitted that location has much to do with pain. Every surgeon knows that a malignant growth located above and out of reach of the sphincter muscle and prostate gland, in the male, causes comparatively little pain. Certainly, then, if pain is not a factor, and no decided stricture of the bowel exists, colotomy would not be advisable. Mr. Jessop has very correctly said that "in cancer of the rectum the constriction in the majority of the cases can be got over for a time by injections, the introduction of the finger or bougie, the use of laxatives and the like." The truth of this statement can be verified by every surgeon who has seen much of this work. It is very well known, too, that when cancer affects the lower part of the rectum obstruction seldom occurs. Recognizing the truth of this latter statement, it would be difficult to understand why such operations as proctotomy, curetting, and excision of the growth would be overlooked and colotomy substituted.

To the proposition that the life of the patient suffering from cancer of the rectum is greatly prolonged, it is, to say the least, doubtful. Patients of this kind usually live from three to six years; can it be demonstrated that by a colotomy they are made to live any longer? No one will contend that the operation done during the incipiency of the disease will stop its progress, and there is no valid argument which will demonstrate that if the operation is done at a later stage of the disease that it will accomplish other than a mitigation of the symptoms. If such symptoms exist, as, for instance, violent pain, and it is possible to relieve such by a lesser means than a colotomy, would it not be best to do so? One can very well understand that if the rectum is blocked by a cancerous growth, and the patient in consequence suffers constant, agonizing pain, with perhaps a teasing diarrhea, and excision is out of the question, how a colotomy would afford instant relief and would be justifiable. It is well known, however, that these cases are rare.

Then, too, some writers would have us believe that the opera-

tion is a very simple one. Mr. Cripps says "colotomy is an operation of great delicacy, requiring a good anatomical knowledge with trained manipulative skill." The mortality in the past of this operation has been very high, as can be recalled by referring to Erckelen's statistics. It is true that in this day of antiseptic surgery the operation is attended with comparatively little risk. Allingham, Reeves, Kelsey, Ball, and others report a considerable number of cases with a very small mortality.

In carefully selected cases the operation can be advised, but in the majority of cases of cancer of the rectum, to do the operation regardless of the well-known principles that are easily recognized by the competent surgeon, an operation, if done, would be ill-advised.

APPENDICITIS.

Surgical procedure in inflammations affecting the vermiform appendix, while as yet unsettled in application and scope, has so advanced its claims as to have at the present time rather the upper hand. It may not, however, be amiss to hint upon occasion that the question, like most other vital issues, has two sides, and though, as is usual with the radical, the aggressive side is the loudest, the conservative is still *quite long-winded* and well in hand.

While the etiology of appendicitis is yet unsolved, the pathology including such several varieties, the prognosis so varying between such wide percents, and the mortality after operation under trying conditions still so considerable, it would appear plausible that a medium would be found, between the heroism which advocates an operation, not the day following diagnosis but the "hour following,"—and the hopefulness which believes the affection rarely fatal. Investigation has disclosed a great and deep swamp of this formerly supposed little bog, but its importance and bearing are still too undetermined to admit of positive conclusions. The very recent investigations of Morris, Robinson, Richardson, Hodenpyle, Fowler, and others have helped put

in a new scientific aspect this important subject, and though much has been added to simplify matters, three imperative conundrums are answered differently by each. Just when to operate, how radical the operation should be, and whether any interference should be made in cases of ordinary severity, remain the crying questions of the hour. Moreover, even after the scientific answer to these questions, as well as the others, has been registered, there will still bob up serenely that telling factor in all theories, the practical application. While it is not the intention to flutter up classical truth with any truant allusions to prosaic daily doings, yet it is not to be forgotten that the public is not easily schooled in the necessities for surgery in its abdomen, and that the application of many better declared and more easily executed principles than this yet unproved necessity, is found often impossible in general practice. So then, however cordially we welcome the truth, radical and aggressive though it be, it must not be too bulky to be carried, nor too uncompromising to be acceptable.

OUR NEW YORK LETTER.

We are pleased to announce that arrangements have been made with Dr. A. Ernest Gallant, of New York City, who will write a letter for each issue of the QUARTERLY, containing a report of the various Sections of the New York Academy of Medicine, of the discussions of subjects within the scope of the journal. We present our readers the first of this series of letters, which contains discussions of subjects of great interest.

MR. HERBERT ALLINGHAM.

Upon going to press, too late for this issue, we are in receipt of an interesting paper upon Colotomy, by Mr. Herbert Allingham, which will be presented to our readers in the July number.

CHARLES B. BALL, M. D., F. R. C. S. I., DUBLIN.

It is the purpose of the QUARTERLY to present to its readers with each issue a picture of some one of the notable surgeons of the world who has gained notoriety in the departments of surgery to the consideration of which this journal is devoted. With the first issue we had the pleasure of presenting an admirable likeness of Mr. William Allingham, of London.

In this issue will be found an accurate engraving of Mr. Charles B. Ball, of Dublin, Ireland. Mr. Ball scarcely needs an introduction to the American profession. His admirable Treatise on the Rectum and Anus and his splendid dissertation on the Radical Cure of Hernia have made his name a familiar one in America. Mr. Ball has an international reputation as a surgeon, and in his own country is regarded as an eminent authority on all things surgical. He is M. Ch., M. D.; University Dublin, F. R. C. S. I.; Ex-Med. Scholar, Senior Moderator and Gold Medalist in Natural Science; Senior Medical Exhibitioner and Surgical Travelly Prize Man, Trinity College, Dublin; Member of Council, and Late Examiner in Surgery, Royal College of Surgeons, Ireland; Past President of Pathological Section, Royal Academy of Medicine, and of the University Biological Association; Surgeon to Sir Patrick Duns and Simpsons Hospitals; University Examiner in Surgery; Author of The Rectum and Anus, their Diseases and Treatment, and a Treatise on the Radical Cure of Hernia.

Mr. Ball's work on Diseases of the Rectum and Anus has reached its second edition, which is now in the hands of the publishers. It is a work of rare value, and has had a large sale in the United States. The editor is placed under obligations to this distinguished surgeon for the sending of his photograph to be presented in this issue of the QUARTERLY, and also for his most admirable paper which appears in this number.

Correspondence.

NEW YORK LETTER.

[FROM OUR SPECIAL CORRESPONDENT.]

SUPPURATIVE APPENDICITIS; RADICAL CURE OF HERNIA BY THE BASSINI METHOD; NEW METHOD FOR RADICAL CURE OF INGUINAL HERNIA; ESOPHAGEAL STRICTURE; ILIAC INTUSSUSCEPTION; GANGRENOUS APPENDICITIS; CIRCULAR ENTERORRHAPHY.

On the 12th instant, in the Surgical Section of the Academy of Medicine, Dr. W. T. Bull read a paper on "Some Further Observations on Suppurative Appendicitis," giving details of eighteen cases. In seven pus was found, and firm adhesions in the majority. In all a distinct tumor was found, either marked or slight. In one case cancer of the ileo-cecal region was diagnosed for appendicitis. He believes that incision must be relied upon for a definite diagnosis; tenderness in the right iliac-fossa, alone, is unimportant; in one or two cases tenderness being only shown in the lumbar region. Mortality, five or six per cent. We find over eighty per cent. of operations for appendicitis have been performed in this country.

Abbe noted the disappearance of dyspeptic symptoms after operation. He does not believe in waiting for a tumor when the clinical symptoms are present.

Bryant thinks the results of operation for secondary appendicitis are admirable and encourages the surgeon to operate, since the percentage is scarcely more than two per cent.

Edebohls believes that a tumor can always, or nearly so, be determined, and if so, operate. A thick omentum, bands of adhesions, etc., may disguise diagnosis. Whenever a pathologic mass is felt in the right iliac fossa we are justified in operating. He maintains that in every female, where we can palpate the normal tube, we can palpate the appendix. "Filled colons" are myths. We must be sure of localized tenderness of the organ.

Morris thinks that an appendix once infected remains so until the lymphoid tissue is obliterated. He operates on mild cases

between attacks, as carcinoma and tuberculosis may result from irritation of long standing.

Last night (27th inst.), at a second meeting of the Surgical Section, Dr. W. B. Coley presented about twenty cases (males), ranging from four years to thirty years, on which he had operated by the Bassini method for inguinal hernia, for periods varying from two and a half to one year, without recurrence. He prefers kangaroo tendon, as it remains *in situ* for a long time, yet is ultimately absorbed, and does not give any trouble later on. He has secured primary union in the last sixty-four cases. In order to get at the relative frequency of recurrence as regards time he has collected 250 cases, operated on in a large majority of instances by surgeons of New York and Brooklyn, and classified them into strangulated and non-strangulated. There were 79 *strangulated*, of which 64 per cent. recurred in the first six months, 20 per cent. during the second six months, 5.4 per cent. during the second twelve months, and 9.8 per cent. after the second year. Of the 171 cases of the *non-strangulated* variety, 120 cases, or 70 per cent., relapsed during the first six months, 27, or 15.8 per cent., during the second six months, 8.5 per cent. during the second twelve months, and 8.5 per cent. after the second year, thus showing that the first six months is by far the most important period, and failure in many cases is believed to be due to the too early absorption of the catgut when used as suture material, and can be overcome by the use of the kangaroo tendon and the Bassini method.

The announcement of a *new* method for the radical cure of inguinal hernia seemed somewhat startling, yet Dr. A. M. Phelps convinced many of his hearers that in some features he has attained this object. Briefly, he proposes: (1) That besides the usual opening the incision be carried through the muscles two or two and a half inches above the internal ring, dividing all the structures down to the sac in the usual way. (2) Turn the sac well up, pass a purse-string suture round the sac at the ring; cut off the sac about an inch above the suture, invert the stump into the abdominal cavity, and tie the purse-string ligature. If the sac is very thin the suture can be run over the fundus, and then the whole sac may be inverted into the abdominal cavity; then, as the purse-string is tightened, the sac will be corrugated at the

internal ring and the opening closed. Where the sac is very thick, after passing the purse-string at the neck, the whole sac is inverted into the cavity and sewn through the peritoneum, so as to lie flat above Poupart's ligament. After excising any thickening at the internal ring, the edges are brought together and the ring closed. (3) And the most important step, is that of placing layer by layer a series of quilting sutures of fine, *roughened* silver wire, so as to form a mattress-like mass over the canal. The cord is brought out in the usual situation. The skin and superficial fascia are closed in the usual way. In the case exhibited, a firm mass could be felt over the site of the whole canal. Dr. Phelps believes that in this way the internal ring, the weakest point after any operation, can be made very secure. The sac will not slough.

Bryant thought the inversion of the stump only increased the likelihood of recurrence. Details and additions to the operative measures add to the dangers. He believes that the whole canal must be strengthened.

Curtis (B. F.) thinks failures are due to lack of tone in the tissues operated on, not so much the method; and Kammerer and Dawbarn believe the invagination of the stump to be a good idea; Coley thinks the stump will slough.

Dr. H. Lilienthal described "A method of differential diagnosis in esophageal stricture, with report of a case," in which he introduced into the stomach, through a small tube the size of the opening in the esophagus, a solution of methyl-violet, then gave the patient water to drink, which could only be accomplished by stretching the neck chicken fashion; and then by lowering the head the fluid in the esophagus was thrown out and came away clear, thus showing that the stained fluid has been passed into the stomach, while the water had not entered, but had been held in the esophagus.

Dr. Torek called attention to the importance of the recognition of the pulsating esophageal tube in aortic aneurism.

"The production of iliac intussusception with the carbonate of sodium" was beautifully illustrated on a young rabbit by Dr. R. T. Morris.

At the regular meeting of the New York Surgical Society, on the 28th of February, Dr. Gerster reported a case of gangrenous

appendicitis, with well-marked peritonitis, in which he opened the abscess and packed, but did not deem it advisable to search for the appendix for fear of disturbing the relations of the sac wall and increasing the infection of the peritoneal cavity. Dressing was changed on the third day, and the wound and cavity were clean. On the fifth day a profuse hemorrhage occurred, causing considerable shock, probably from the stump, in which, at the time of operation, there had been a bleeding-point on which a clamp had been left. On the nineteenth day all the symptoms (feculent vomiting, contraction of the intestines, seen through the abdominal, etc.) of well-marked intestinal obstruction necessitated reopening the peritoneal cavity. The incision was made, a continuation upward of the original opening, in order to avoid disturbing the adhesions in the neighborhood of the appendix. The pelvis was filled with collapsed small intestine, and after tracing and gradual separation of recent adhesions the ileum was traced to the right hypochondrium, where, behind the spleen, a dense band of fibrous tissue was found encircling the lumen of the gut, attached both in front and behind to the mesentery of the gut involved. The band was ligated above and below, cut through, and peristalsis was at once resumed. The child recovered, and is in good health to-day.

Dr. McCosh, in illustrating the usefulness of circular enterorrhaphy, presented a man who had suffered from strangulated inguinal hernia, from whom he had excised six inches of small intestine years ago, who has had no trouble since, and is hale and hearty. He also reported another case done two and a half years ago, and the patient is in excellent condition. Dr. McCosh applied a line of interrupted sutures to the mucous membrane, a second line through the whole thickness of the gut, and a third line through the serous coat.

The following are the cases of circular enterorrhaphy:

Case 1. Strangulated hernia; woman, aged sixty-five years; ten inches of gut removed; three lines of silk sutures; operation five or six years ago, and patient still in good health.

Case 2. Strangulated hernia; gangrenous; excision of ten inches of small intestine; two tiers of silk sutures; done two and one half years ago; good health at present.

Case 3. Man; strangulated hernia; resection twelve inches

small intestine; three tiers of silk sutures; done two and one half months ago; man doing well.

The question of the advisability of using the continuous suture for the serous coat being raised, Briddon, McBurney, and Wyeth strongly objected on the ground that it would interfere with the subsequent dilatation, which must ensue when the contracted gut resumed its normal caliber and activity.

EDITORS MATHEWS' MEDICAL QUARTERLY:

Your circular informing me of your latest business venture was handed me this A. M. Let me congratulate you for being the first to edit a journal devoted to the subject of rectal and gastro-intestinal disease and surgery. Your journal will supply a long-felt need, and will prove of service to every physician, and indispensable to those interested in rectal surgery.

During our travels and brief stay in this portion of South Africa we have examined many hundreds of patients. A number of cases first applying to us proved to be influential men, and after they were cured we gained a wonderful reputation, partly owing to the fact also of being "American Doctors." My life being spent with doctors, and as a druggist, I realized that the value one places on himself has also to do with his success, so I can assure you that the prices we charge are sufficiently high to command respect at least.

We have had eighty-two cases of rectal diseases; and, strange to say, the majority of them were prolapsus of rectum in about the proportion of one case of hemorrhoids to nine of prolapsus. Perhaps this is due to the habits and pursuits of the people in this section of the country.

We have met with many strange diseases and conditions, many kinds of skin diseases, lupus of several varieties, leprosy, guinea-worm, etc. We have removed many (two kinds) tapeworms, one patient having three full-sized ones, making a full pint when expelled. We get the head every time, many times the worm coming away entire or whole.

One strange disease has puzzled us, and no M. D. in Africa can cure it for a certainty. We have had several cases and

cured but one. It is a condition where the urine contains blood, also the last of stream being nearly pure blood. In many cases it comes on healthy boys, say about ten or fourteen years of age, and lasts many years; may, after a few years, get well without treatment, or may get worse every year. We had one case of a boy, twenty years of age, who had contracted it six years previously, and each year it got worse. No symptoms, except an occasional backache; no history of kidney disease; no bad habits; never drank, etc.; apparently well always; but as this lad knew others to die of this trouble he came to be cured. Tried all sorts of astringents; washed out bladder; medicine internally; tonics, diuretics, astringents. I lay it to a parasite in the walls of the bladder. There is no way of getting literature on the subject in South Africa, but I think it due to the presence of bilharzia, a parasite trematode. There are districts afflicted with this. We are about to leave for Europe, and will study these conditions if we get a chance.

OLIVER L. JONES, M. D. *Johannesburg, Africa.*

Rogers, W. B., Memphis: Resection of the Small Intestine End to End Anastomosis with the Murphy Button. (*Philadelphia Medical News.*) The patient, a young man, jumped from a wagon to the ground, which caused the descent of a right inguinal hernia which he had been subject to for several years. The hernia was thought to be reduced, but pain persisted, extending from the inguinal canal to the umbilicus. Obstinate constipation persisted.

Two days after descent of hernia he was seen by the writer; tympanites was present, marked tenderness over region where pain had been most marked, and stercoraceous vomiting was present. An incision was made and a constriction noted at the internal ring. Eight inches of the gut were draw out and at each end there was gangrene present. Ten inches were cut out, and an approximation made by the end-to-end method with the Murphy button. Reaction was marked, the temperature being 103° F. The progress of the case was favorable, the drainage-tube being removed on the third day, and the button passed on the seventh day.

Necrology.

THEODOR BILLROTH, M. D.

Theodor Billroth, M. D., Professor of Surgery in the University at Vienna, died at Abbazia, in Austria, February 6th, aged sixty-four years. He was born on the Island of Rugen, in the Baltic, and received his education in arts and medicine at Göttingen, Berlin, and Vienna. In 1855 he was assistant to Langenbeck at the clinic. In 1859 he was made professor at Zurich, but returned to Vienna in 1867, where he has since remained. During the Franco-Prussian War he had charge of the military hospitals on the Rhine. In 1881 he performed successfully the first operation of pylorectomy for cancer of the stomach. Of his numerous writings his work on "Surgical Pathology" is probably the best known.—*Boston Medical and Surgical Reporter.*

We copy from the *British Medical Journal* the following from the pen of Sir William MacCormick:

"Few men more than Professor Billroth could inspire one with a greater sense of combined power and modesty. In manner and appearance he was most winning and sympathetic. His pupils and friends alike admired and loved him. I met him after the war in 1870–71, when he had already left Switzerland for Vienna, and several times in company with Langenbeck, his former master and fast friend. At that time it was thought by some in Vienna that he was still German in feeling, and would return sooner or later to take Langenbeck's succession, but this was not so, and he became in all his work and sympathy completely identified with the people among whom he lived. He was prominent among all his contemporaries in Austria, and sent his pupils to fill the chairs of surgery, not in Austrian universities alone, but, as in the case of Czerny and others, to many German universities as well.

"As an operator his knowledge and boldness were only equaled by his brilliant execution and skill; and what he did and the reasons for doing it were explained to his overflowing class with a rare talent for exposition. His patients, attracted by his great

fame, came from all distant parts—not rich only, put poor also, to fill his hospital beds. He loved his science and art, but he loved other arts as well, and painting and music were his favorites, while the great masters of both were among his most intimate friends.

"One personal reminiscence may be interesting as showing his princely hospitality. During the great International Exhibition in Vienna, he entertained a party of about one hundred military and civic surgeons, who had come to attend a conference on the subject of medical aid in the time of war, at a banquet at Vöslau, a well-known suburban resort of the Viennese. There were the choicest wines, from the Imperial Tokay downward, native oysters from Colchester, sturgeon from the Volga, and, last and best, Strauss' band. I shall not easily forget the magical effect produced, when, after dinner, Johann Strauss, one of Billroth's great friends, mounted the orchestra, and, waving his bâton, the band played the 'Beautiful Blue Danube.' The music was beautiful before, but it seemed transformed when Strauss led it. Immediately afterward Billroth gave the only toast proposed on this memorable occasion. He said: 'Ein Oestericher grüsse ich sie, in Oesterich, mit Oesterich.' The response did not want in enthusiasm. This dinner took place in a restaurant on the slope of a vine-clad hill covered with ripening grapes, which were to make wine such as we were drinking."

What Our Friends Say.

I HAVE just finished a superficial examination of the first number of your journal, devoted to diseases of the rectum, etc. I say *superficial* examination because, though I have been reading at leisure moments its pages since I received the first copy, over a month ago, the store-house of information which it contains is so vast and interesting that, like the widow's cruse of oil, of old, its depth seems impossible to fathom. In conclusion I can only say of the first number of the journal that it makes me feel like the hungry man who is eating his first mouthful of food—anxious for the second. With my best wishes for a deserved success in your venture, believe me, very truly yours.

LEWIS H. ADLER, JR., M. D., Philadelphia.

I AM much pleased with the "make-up" and general appearance of your handsome new QUARTERLY. It comports, in its scientific and literary *aspects*, with the "*get-up*" of its accomplished editor and proprietor. The table of contents of your first number, and the able and practical manner in which the several subjects are there treated, is a convincing proof of the necessity for such a journal as your new QUARTERLY. There is a *fundamental* need for such a journal and such clinical workers as your list of contributors introduces to the profession. Go on in your good work—*alis volat propriis*—and with that *mens conscii recti* which is inherent and natural to you, you are sure of abundant success.

C. H. HUGHES, M. D., St. Louis, Mo.

THE QUARTERLY reached me yesterday. It is my regret that I am "not in it." If this is to be the character and scope of your journal, it at once loses its character as a mere periodical and becomes an indispensable volume for every physician and surgeon. Most heartily do I congratulate you, and if I ever presume to write any thing inside the fence I shall beg for space. Place me on the list.

RICHARD DOUGLAS, M. D., Nashville, Tenn.

I HAVE just received the first number of your QUARTERLY, and congratulate you beforehand on your success, which is already achieved. There is no question of the fact that such a journal is needed, for the average doctor is woefully ignorant in regard to our "latter ends," as Emmett Logan puts it, and needs rectal education. Please enter my name on your list of subscribers.

ARCH. DIXON, M. D., Henderson, Ky.

THE journal came to hand on the 20th, and I must compliment the editors upon producing a periodical which in its contents and mechanical execution is highly creditable, not only to yourselves but to the medical profession of this country. The first issue gives promise of usefulness which ought to secure for you a large subscription list. I wish you great success.

FRANK WOODBURY, M. D., Philadelphia.

YOUR initial number received early this month, and I should like to say that in excellence of subject-matter, arrangement, and scope, as well as attractive typographical work, MATHEWS' QUARTERLY strikes me as a peer in journalism, which no "up-to-date" surgeon can do without. I shall look forward to each succeeding issue with pleasure.

A. E. GALLANT, M. D., New York.

I AM delighted with the January issue of MATHEWS' MEDICAL QUARTERLY. It is a great satisfaction to know that there is a common journal to which all interested in diseases of the rectum and gastro-intestinal disease may turn for information and communion. I congratulate you.

DANIEL MORTON, M. D., St. Joseph, Mo.

THE QUARTERLY came duly. I have gone through it critically, and you are certainly to be congratulated. I am over my ears in hospital and library work, but I am anxious to appear in MATHEWS' MEDICAL QUARTERLY, and shall put other things aside in order to give you a paper.

CHARLES A. L. REED, M. D., Cincinnati, Ohio.

We have examined the copy of Mathews' Medical Quarterly, and know that if you keep it up to excellence of this copy, you will have a very valuable property in due time. It is most excellently edited and beautifully designed and printed. We wish you abundant success.

WM. H. LEHMAN, Manager *Medical Brief.*

I have read the Medical Quarterly and am delighted with the many new ideas it contains. Allow me to congratulate you upon your success. Its future is now assured. Every one among my associates speaks of the new journal with the highest praise and admire your enterprise.

JOSEPH B. BACON, M. D., Chicago, Ill.

You have issued a splendid publication. I am proud of the association of such distinguished writers. It will be a very useful journal and will fill a unique place. It is a success. I was pleased to see my friend Bacon at the head of your journal, as he invented a useful operation.

F. BYRON ROBINSON, M. D., Chicago.

An attack of *la grippe* prevented me from preparing in time the article your kind letter suggested for the Quarterly, so I was obliged to give up my intention of preparing it. I have just received the sample copy and congratulate you on its ability and excellent assurance.

EDMUND ANDREWS, M. D., Chicago.

The Quarterly to hand. I wish to congratulate you on this beginning, and am very glad to see that you have placed the standard high. This is a credit to yourself and to the cause for which it is published. Maintain this standard of excellency and future success is assured.

GEO. G. COOK, M. D., Indianapolis, Ind.

I thank you for sending me Mathew's Medical Quarterly, received last week. I congratulate you most heartily upon the appearance, quality, and quantity of your first issue. It certainly does great credit to all who have helped in its production.

E. A. TUCKER, M. D.,
Sloane Maternity Hospital, New York.

I BEG to acknowledge the receipt of the initial number of your QUARTERLY. Allow me to say that it is a fine number, both as regards the character of its contents and typography. I wish you every success in this journalistic venture.

G. H. MAYHUGH, M. D.,
Editor *Sanative Medicine*, Westerville, Ohio.

I CAN'T help writing you a line to tell you that I think the first number of the QUARTERLY is admirably gotten up. The articles it contains are excellent. I feel very proud of it as a Southern production.

HUNTER McGUIRE, M. D., Richmond, Va.

YOUR journal received and carefully studied. I congratulate you on such a splendid start, and predict for you a successful career as a journalist. Please send it to me for one year. With best wishes.

JAS. T. JELKS, M. D., Hot Springs, Ark.

I THANK you for sending me a copy of the first number of MATHEWS' MEDICAL QUARTERLY. If the future numbers maintain the high character of the first issue, its success is assured.

CHARLES G. KELSEY, M. D., New York, N. Y.

IT gives us much pleasure to acknowledge the receipt of your new QUARTERLY, which reached us by this morning's mail. We congratulate you upon the excellent appearance of the journal.

THE F. A. DAVIS CO., Philadelphia, Pa.

YOU can't imagine the pleasure I felt in seeing your journal in the Academy of Medicine. It is not only a pleasure but pride that such a journal comes from Louisville.

J. A. BODINE, M. D., New York, N. Y.

MATHEWS' MEDICAL QUARTERLY received. Too much praise can not be bestowed upon the able manner in which it is gotten up. I wish it all the success it deserves.

W. A. EARLE, M. D., Worcester, Mass.

I WISH to thank you for the copy of the first number of your new journal, which makes a very good show indeed, and has excellent chance of success.

ARPAD G. GERSTER, M. D., New York.

I MUST say the QUARTERLY is a first-class journal, and it is my earnest desire that it will meet with a grand success which it so well deserves.

J. H. GOSS, M. D., Athens, Ga.

I HAVE received the first number of your journal and am much pleased with it. I shall try and contribute something to it some time.

THEO. A. McGRAW, M. D., Detroit, Mich.

I HAVE enjoyed very much your first number, and would like to be entered as a subscriber. Renewed wishes for your success.

W. T. BULL, M. D., New York.

WE have received a copy of your MEDICAL QUARTERLY, and are glad to welcome so fine appearing and high class a journal.

P. BLAKISTON, SON & CO., Philadelphia.

YOUR first number received. It is simply excellent, useful, and elegant. Good luck. "May you live long and prosper."

LANDON B. EDWARDS, M. D.,
Editor *Virginia Medical Monthly*, Richmond, Va.

THE copy of MATHEWS' MEDICAL QUARTERLY sent me has been carefully read. It is a most excellent journal.

SPENCER C. ALEXANDER, M. D., Owingsville, Ky.

MATHEWS' MEDICAL QUARTERLY is a journal that I have been looking for for a long time.

L. J. KROUSE, M. D., Cincinnati, Ohio.

I CERTAINLY congratulate you on the first number of your journal, it is very creditable.

SAMUEL T. EARLE, JR., M. D., Baltimore, Md.

I CONGRATULATE you on your new journal. It does you credit.

G. FRANK LYDSTON, M. D., Chicago, Ill.

HEARTY congratulations on the QUARTERLY. It is *a beauty!*

CHARLES WOOD FASSETT, St. Joseph, Mo.

MATHEWS' MEDICAL QUARTERLY.—The first issue of Mathews' Gospel pertaining to medicine and surgery is before us, a quarterly journal devoted to diseases of the rectum, gastro-intestinal disease, and rectal and gastro-intestinal surgery. It is a magnificent production. The paper and the typography are excellent. One hundred and thirty-four pages of original reading-matter appears, presenting the contributions of Bernays, Allison, Lanphear, Bacon, Koplik, Byron Robinson, Robert T. Morris, Frank Woodbury, John B. Hamilton, Walker, Bryson, Marcy, Straus, and Morton, together with society proceedings, editorial matter, and judicious selections. With the national reputation which Dr. Mathews has, and the host of friends throughout the United States, having furnished a good journal (and this is of itself very important), he can not do other than succeed. An attractive portrait of William Allingham, together with a short biographical sketch, adds to the artistic features of the journal. Dr. Mathews is ably assisted by Dr. Henry E. Tuley, of Louisville, who appears upon the title page as associate editor and manager.

The *Medical Mirror* hopes, as the years come and go, with each succeeding one that MATHEWS' MEDICAL QUARTERLY will grow more brightly green and give evidence of thrift and success, in fact keep pace in development with its talented owner and editor, Dr. Mathews.—*Dr. I. N. Love, in the Medical Mirror.*

THIS is a new journal whose coming we have awaited with impatience. The only green thing about MATHEWS' MEDICAL QUARTERLY is the cover. It is the only journal in our language devoted to rectal and allied subjects. It is a success. There are sixteen original articles by Bacon, Tuttle, Morton, Lanphear, Allison, Straus, Koplik, Bryson, Bernays, Robinson, Morris, Woodbury, Hamilton, Wyeth, Walker, and Marcy; society reports, timely editorials, and a valuable epitome of recent rectal and gastro-intestinal literature. This issue contains a fine portrait of William Allingham, of London, whose work in rectal surgery is well known on this side of the Atlantic. Prof. Mathews' journal will be welcomed by thousands of doctors who want to know the latest views in pathology and treatment of gastro-intestinal and rectal diseases. *The Tri-State Medical Journal* takes off its hat to MATHEWS' MEDICAL QUARTERLY, and remarks that we are a pair of healthy infants.—*Tri-State Med. Jour.*

We have seldom or never been so favorably impressed by a new medical journal as by this one. The first number is a veritable mine of information upon the subjects embraced. Every physician comes in contact with this class of diseases, particularly diseases of the rectum. Dr. Mathews was the first regular member of the profession to make a specialty of diseases of the rectum. As usual, irregulars first reaped a rich harvest in this field before the regular profession saw the importance of devoting special attention to it. We owe Dr. Mathews much as a pioneer in this direction, and also for this valuable publication. This first number is worth many times its price to the general practitioner. The doctor wishes the names of all reputable surgeons in the United States who limit their practice to diseases of the rectum.—*The Medical World.*

Mathews' Medical Quarterly. — The advent of this journal, the first number of which lies before us, scores another point in the progress the surgeons in this comparatively new specialty are making. That distinguished and accomplished rectal surgeon, Joseph M. Mathews, is at the helm of the new venture, and this alone is sufficient earnest that the journal will prove very valuable to the specialist and general profession. The present number abounds with original reading-matter, and the publishers have assurances for the future of the collaboration of many of the leading operators and writers of this country and Great Britain. We present the Quarterly our compliments and best wishes.—*Memphis Medical Monthly, February,* 1894.

"There's a new foot on the floor, my friends."

Mathews' Medical Quarterly was announced as being on the way in one of our recent numbers. The initial number contains one hundred and ninety pages of reading-matter, most of which is original. A journal devoted exclusively to diseases of the rectum and stomach and intestines is unique, and must come upon the profession as a surprise; but no doctor who surveys the beautiful and substantial proportions of the "new face at the door" will fail to own the surprise agreeable.—*The American Practitioner and News, January,* 27, 1894.

THE first number of this sterling periodical is on our table. It contains about one hundred and ninety pages, and is devoted entirely to diseases of the rectum, gastro-intestinal disease, and rectal and gastro-intestinal surgery. The work, which is printed on fine paper, with most excellent typographical work, is filled from cover to cover with matter by leading members of the profession on these interesting subjects. The mere fact that Dr. Mathews is at the head of this quarterly is guarantee sufficient that a high standard will be maintained, for he is the foremost man in his profession in the United States to-day. We wish the new venture all the success that it merits.—*New England Medical Monthly.*

MATHEWS' MEDICAL QUARTERLY, a journal devoted to diseases of the rectum, gastro-intestinal disease, rectal and gastro-intestinal surgery, has made its appearance. Its first number, January, 1894, is an exceedingly handsome magazine, standard octavo in size, printed on tinted paper, in long primer type, and contains one hundred and eighty-eight pages of interesting reading matter. . . . It has no rival in the field that it proposes to occupy, and nothing but success can crown the efforts of its distinguished editor in his useful and masterful enterprise.—*Buffalo Medical and Surgical Journal, February,* 1894.

THE first number of MATHEWS' MEDICAL QUARTERLY, devoted to diseases of the rectum, gastro-intestinal disease, and rectal and gastro-intestinal surgery, edited by Joseph M. Mathews and Henry E. Tuley, is of unusual excellence. A large number of contributors give the result of their experience in short, practical articles, covering a wide field of investigation. There is room for such a journal, which, conducted on its present lines, can not fail of success.—*New York Medical Times, February,* 1894.

MATHEWS' MEDICAL QUARTERLY, devoted to diseases and surgery of the rectum and gastro-intestinal tract, has just appeared. Dr. Joseph M. Mathews is editor, and Dr. Henry E. Tuley associate editor. The first number, aside from the verdancy of its cover, is most creditable.—*Chicago Medical Recorder.*

A Word to the Busy Doctor.

Of the frequency of rectal disease every doctor is acquainted; of its importance no one can doubt. Disease found in the rectum may be of small consequence, or of the utmost gravity. Any condition, from a simple congestion to a carcinoma, may have its seat in this portion of the gut. All classes may be affected with one or the other of rectal ailments. The rich are peculiarly liable to certain forms of disease of the rectum. Luxuriant living and sedentary habits conduce to such trouble. The poor are not exempt, for their method of living may also be productive of certain forms of disease of the rectum. The drinking man and the *gourmand* are special subjects for such diseases, for by their habits they produce such conditions as to breed the existence of a morbid change. And yet the abstemious man or woman may, without a seeming provocation, have internal hemorrhoids, fistula in ano, or a proctitis. Every physician, be he in country or city practice, comes in daily contact with some disorder of this kind. Recognizing that from the most insignificant pathological starting point may arise a condition of serious import in this region, it is singular how little attention is usually paid the ordinary patient by the attending doctor. In each an every instance, where a patient complains of rectal trouble, it is positively necessary that an examination should be made. I will be permitted to speak a few words about the method of making this examination.

It is taken for granted that in every doctor's office is an examining-table. I specify *table*, for the common run of surgical *chairs*, however well they may meet the demand of the gynecologist, fail to subserve the purpose of the rectal surgeon. If the doctor is not provided with a table to be used for such purpose, a very good one can be gotten up at but little cost. Go to a carpenter and tell him you desire to have made a cheap, but firm table of the following measurements: Three and one half feet high, four feet long, three feet wide. To the end of this table

have attached two leafs, which can be raised or lowered at will; under each leaf a sliding piece should be placed that could be drawn out or pushed in as desired. Over the body of the table a mattress should be fitted, and over this an oil-cloth. This improvised surgical table will meet all demands for examining rectal patients, especially if the table be provided with drawers to hold instruments, etc.

WHEN a patient presents with rectal symptoms of whatever nature, an examination should be insisted on. An important auxiliary is a sheet, which should never be dispensed with in the examination of lady patients. The table should be drawn to a good light, and a close inspection be made of the parts. Some rectal surgeons prefer artificial to the natural light. If this should be the preference, the outfit need cost but a small outlay. An Argand burner, together with a head mirror, is all that is needed. In the country a student's lamp will answer every demand. I am in the habit of using natural light nearly altogether for these examinations.

HAVING the patient on the table, it is best to have him assume Sims' position. By ocular inspection of the external parts a great deal can be learned or detected. Among the pathological conditions that could be readily seen are the following: External fistulæ, abscesses, external piles, the scarfskin, with abrasions, which constitute pruritus ani, condylomata, eczema, syphilitic eruptions, fissures, prolapsed internal piles, prolapsus ani, pus discharge from the rectum, warty excrescences, hemorrhage, etc. I again assert, that it is singular with what impunity these examinations are passed when by even an ocular inspection so much might be revealed.

I HAVE suggested that all patients complaining of rectal symptoms should be submitted to an examination of this kind, and I would include in this list the person suffering from obstinate constipation. But it must not be forgotten that the examination should be carried further than a simple inspection. An

investigation of the rectum proper should be made. It is not necessary to have a whole list of instruments in order to do this. A good rectal speculum and a pair of dressing forceps will meet the case. In my own practice the speculum is seldom used. The educated finger can reveal more and with less pain than any instrument. Anointing the forefinger with a tenacious grease—lard, vaseline, or cosmoline—is much better than any oil; insert slowly and without force into the rectum.

If much pain is caused by the introduction of the finger into the anus, it can be safely said that an abrasion, fissure, or ulceration exists, for no pain would be caused by inserting the well-greased finger into a healthy anus. With the finger well up the rectum a number of pathological conditions could be made out, such as stricture, enlarged prostate, polyp, syphilitic ulceration, benign ulcer, cancer, internal fistula, internal abscess, inflamed or atrophied piles, etc.

As has been remarked, the patient has perhaps only complained of an obstinate constipation, when such examination will reveal the existence of a close stricture, which of course would explain the cause of the constipation. So insidious are the symptoms oftentimes of stricture of the rectum that no other symptom is complained of, except the inability to have a free action. How easily it would be for such a condition to escape the knowledge of the physician unless he searched for it. Many such cases have been treated for such a length of time, based on a wrong diagnosis, that much harm has been done the reputation of the physician attending, and serious detriment done the patient's health. An annular stricture of the rectum may start from a very simple cause, but may be the cause of even total obstruction of the bowels. If not diagnosticated, or if its presence is overlooked and the case treated as one of constipation, constant injury would accrue to the patient.

The other conditions named that can be diagnosticated by the insertion of the finger into the rectum can be just as readily treated as stricture; but it is of the utmost importance to diag-

nosticate them, and this can not be done by a simple inquiry of patient as to symptoms, for their answers are often misleading. A teasing diarrhea can be excited by the presence of a polyp, or a so-called dysenteric discharge may be produced by the existence of capillary piles. It is no uncommon thing for patients suffering from an incipient malignant disease to be treated for dysentery. The simple introduction of the finger into the rectum would enable the physician to make the proper diagnosis.

THERE are some obscure rectal affections which would require the use of a speculum to properly diagnosticate. Among these might be mentioned *proctitis;* or it may be that an ulcerated spot along the wall of the rectum has escaped detection by the finger. Internal piles too can be *seen* when they can not be *felt.* Whenever it is necessary to make an application to the rectum, of course a speculum is indispensable; but the indiscriminate use of this instrument is to be deprecated, first because there are very few things or conditions that require such an examination to diagnosticate; second, a speculum examination is usually very painful.

With Our Exchanges.

DISEASES OF THE RECTUM.

MATHEWS, J. M., LOUISVILLE, KY.: THE ETIOLOGY, DIAGNOSIS, AND TREATMENT OF ULCERATION OF THE RECTUM. (*New England Medical Monthly.*)

For a matter of convenience I will classify these ulcers under four heads, viz., benign, malignant, tubercular, and specific. To this division there might be a valid objection based upon correct pathological grounds. As for instance: In this classification I make the term malignant synonymous with cancer, and yet the tubercular ulcer may in truth be malignant, without assuming the characteristics of cancer. Again, some writers would have us believe that the tuberculous patient was closely akin at least to the syphilitic one, or *vice versa;* and thirdly, there is a well-grounded belief with pathologists that innocent or simple ulceration may at any time take on proportions of malignancy. These subjects would take more time than is given me to discuss them to-day. Therefore, to begin in the order named, I would say that benign ulceration is not so frequently found in the rectum as is supposed. Indeed, whenever I meet with a well-defined ulceration existing in the rectum I immediately begin to suspect some special diathesis. One would think that from the office of the rectum it was peculiarly liable to become ulcerated; but if we study the part anatomically it will be seen that nature has provided it well for the purpose it serves. For instance, its mucous membrane is much thicker than any other portion of the intestinal tract, and therefore more able to resist irritation. The pouch of the rectum is very capacious and sufficiently able to accommodate the supply. It is only when the physiology of defecation is interfered with that any danger is to be feared. The lumen of this portion of the gut is not narrowed by any ordinary causes. For these and other reasons I have long since been forced to believe that such ascribed causes as pregnancy,

dysentery, etc., were not great factors in producing ulceration of the rectum.

Malignant Ulceration. The rectum is a favored seat for cancer. Many times the disease is overlooked entirely or diagnosticated as some other affection. It has occurred to me several times to have had patients referred to me for some trivial rectal trouble and found cancer instead. One would think that of all diseases affecting this portion of the body that cancer could be most easily told. If we take the books as guides I can very readily see that a faulty diagnosis is quickly arrived at. If we are to believe that such symptoms as pain, hemorrhage, and the discharges are characteristic, and that the odor is pathognomonic, then cancer is quickly told. But when it is a fact easily demonstrated that cancer may exist without even one of these symptoms being recognized, it then becomes a matter of much confusion. You might ask, have we not in the microscope an infallible resource for diagnosis? I would answer, I think not. Upon five different occasions has the microscope told me that I was dealing with a carcinoma when the after-treatment revealed the fact that it was not so. I am inclined to believe that about as much as we know on this subject was known many years ago. "The cancer cell is widely different from the gland cell, and they are grouped differently from the natural cells." What are we to do, then, when dealing with a suspected case of cancer? Take the general clinical history, with symptoms, to aid in our diagnosis.

Tuberculosis. This is a more common form of ulceration of the rectum than is generally supposed, reversing, in my opinion, the verdict in the case of benign ulceration. Koch's discovery of the *tubercle bacillus* has thrown much light on this subject and aided us materially in the treatment of all forms of tubercular affections. The treatment of tuberculous joints, bone, tissues, etc., has nearly been revolutionized by this discovery, and although it has knocked out of joint that old and most sacred teaching of heredity, it has done much for the afflicted. It had become almost a part of theology to believe that the sins of the father were visited upon the children for generations, but it is unorthodox (medical) for one to believe now that consumption is hereditary. I have seen many cases of tubercular ulceration of the rectum that went on to a fatal termination without the slightest

sign of tubercle in the lung. The diathesis bears such unmistakable symptoms that it is hard to mistake.

Specific Ulceration. That syphilis is the cause of ulceration of the rectum no one will deny. That it is responsible for fully one half of the cases I am fully convinced. Although I have been criticised for saying this, I am more convinced every day that it is true. I have taken occasion before to say that whenever I see a well-pronounced case of ulceration of the rectum, and can clearly eliminate cancer, then in the majority of cases it will prove to be syphilitic.

It is estimated by a late writer that fully six million people in the United States have syphilis. Admitting that it often shows itself in the form of ulceration in the rectum, it is no wonder that the estimate in numbers could occur. One does not have to be in rectal practice long until he is surprised at the number of such cases met with.

Having just incidentally referred to the four causes of ulceration of the rectum without going fully into the etiology, you will permit me to refer in few words to the diagnosis.

I know of no class of disease that requires more absolutely a correct diagnosis than do these. The treatment must in every individual case depend upon a correct opinion of it. We can not treat a benign ulcer as we would a malignant one; nor a tubercular ulcer as a specific one; nor the last-named as the first-named.

Benign ulceration must begin as a lesion to the mucous membrane. The term trauma here would be most appropriate. Therefore a history of a wound, or any thing that might lacerate, break, or in any way damage the membrane, must be sought after. Of course the class of ulcers called irritable can not be considered in this article. They have one symptom that will always diagnose them, viz., pain coming on directly after stool, and a search reveals the ulcer on or embracing the sphincter. The appearance of a benign ulcer is very different from any other character of ulceration. Its edges are hard and resist invasion. The base and margins are likewise, and a quick disposition to heal exists with the slightest treatment. In other words, an innocent ulceration in the rectum is very much like the same located anywhere else. A malignant ulceration possesses properties directly opposite to the benign type of ulcers. Their disposition is to infiltrate and

break down. No treatment will prevent this. The edges and base quickly yield and the ulceration rapidly extends. I would much rather trust to these conditions to tell me the nature of the ulceration than to the so-called pathognomonic signs of bleeding, pain, and odor. The tubercular ulcer is closely allied to the malignant one in general appearance and some characteristics. It bleeds freely when touched, is disposed to break down, and sometimes its progress is rapid. One characteristic, however, is that the process is painless. I have seen cases of this kind where the buttock was nearly destroyed, involving the rectum, and the patient complained of but little pain. There are two things, however, that will quickly aid in the diagnosis:

1. The diathesis, which is easily discerned.
2. The discovery of the special bacillus.

In malignancy the peculiar color or cachexia is secondary to the existence of the primary cause, the tumor. In tubercle ulceration is secondary to the diathesis. The physical signs of cancers are nodules, those of tubercle, a ragged and irregular edge.

Cancer begins subcutaneously as a growth and ulcerates afterward.

Tubercle begins either as an ulceration or cold abscess.

The discharge from a malignant ulcer is pus, or pus mixed with blood; from a tuberculous ulcer, broken down tissue serum, and an occasional pus producing microbe.

Outside of all physical signs, the microscope would make the diagnosis in tubercular ulceration.

In the specific, or syphilitic ulcer, we generally have the history of the disease from the patient or *prima-facie* evidence of its existence in symptoms. Besides this the feeling given to the finger is unlike any other character of ulceration—not nodular as cancer, nor ragged as tubercular. Nor does it possess that distinct appearance of the benign ulcer. It is not circumscribed by a wall of lymph either, for it comes from the ulcerating process of a gummatous deposit, and may extend for inches up the rectum. It is more insidious than cancer, and yet attended by all its horrors, in other words, just as incurable after it gets a good foothold in the rectum. It is slower in its progress than cancer, but cruel in the length of time it takes to destroy. The most terrible cases of it that I have ever seen have been in pure, virtuous women, the victims of their husbands' vices.

Treatment. I can barely allude to treatment of these different ulcerations and will make it suffice to call attention to the methods briefly:

Benign—Local applications.

Malignant—Extirpation.

Tuberculous—The curette.

Syphilitic—Antisyphilitic treatment, colotomy, local medication, extirpation.

In the treatment of the first-named, benign ulcerations, it is absolutely necessary to have rest for the part. Mr. Hilton gives us a most excellent hint in this regard in his little book called Rest and Pain. Every surgeon has recognized how utterly fruitless have been his efforts to heal ulcers on the lower extremities while his patient persisted in walking about. So with the rectum, if it is to be used every day in evacuating the bowels, that disturbance will prevent the healing process. The first thing to be done is to thoroughly purge the intestinal tract; second, confine the patient to bed; third, local applications. Having the bowels purged, a large enema of hot water should be given, the patient put upon a liquid diet, and if the ulcer is in the veins, and is at all indolent, it should be touched with nitrate silver or other stimulating applications; after healthy action is established an injection made into the rectum daily of:

℞ Sweet almond oil ..... ℥j;
Iodoform ..... gr. v;
Sweet nit. bismuth ..... ℥ss.

will do much to cure the ulceration. Every fourth day the patient should be given an aperient. I need not call your attention to the fact that these patients are often treated per mouth for dysentery, which they have not, when a few days of local treatment will effect a cure.

Malignant Ulceration. In the introduction of treatment I have said that ulcers of a malignant type should be extirpated. I know how common the idea and practice is to resort to colotomy for this condition. By comparison it is in substance this: By a colotomy you do a disgusting operation, and leave the offending mass just where it was; by extirpation you remove or attempt to remove that which is sure to kill if left. By Kraske's operation we are enabled to accomplish this in many cases.

Tuberculous Ulceration. According to modern thought and investigation we must believe that from any given point of a tuberculous deposit infection of neighboring or distant parts may take place. The conclusion, then, is irresistible that said point must be destroyed.

It is clearly demonstrable that if that point be in the rectum the curette is the best instrument or way to get rid of it. In so doing, however, the same hint that is to be observed in removing cancer must be observed here: it must be done thoroughly.

Syphilitic Ulceration. The ratio of difference between cancer and syphilis of the rectum is in the time that each takes to kill, and the advantage that accrues to the patient will be given to cancer, for it ends the misery much quicker than its competitor, syphilis, which inflicts a long-drawn-out misery with a certain death. I have often said, and still insist, that where a syphilitic ulceration, with coincident stricture of the rectum exists, the condition is just as incurable as cancer.

If, then, the ulceration is seen in its incipiency, which it really is, we must rely upon antisyphilitic and local treatment; if a stricture exists and is within reach it should be resected; if located beyond the reach of the finger and is a close constriction, an inguinal colotomy is advisable. In all these operations around the rectum I am in the habit of using, as a cleansing agent, Marchand's peroxide of hydrogen. Indeed I consider the preparation indispensable in my work. Whatever strict asepsis may do in wounds elsewhere, it is best in wounds around the rectum to use chemical agents sometimes, and the best of these is bichloride of mercury. Not having the time to elaborate the points hinted at in this paper, I will close by saying that if any additional light has been thrown upon this very important subject by this paper I am repaid.

Brown, W. S., Stoneham, Mass.: Rectal Hemorrhages in Women. (*New York Medical Examiner.*)

When bleeding takes place in the rectum, it usually proceeds from hemorrhoids. A rectal polypus may be the origin of hemorrhage; but this is a rare occurrence. I have only seen two cases during the last thirty years. Fissure, also, is an occasional source of bleeding.

Piles are not confined to women; many young and middle-aged men are also affected; but, on account of the larger supply of blood to the pelvic organs in women, and also because they are more subject to constipation, we are more frequently called upon to treat piles in women than in men.

Allow me to refresh your memory concerning a few anatomical data. The rectum is about eight inches long, narrowest where it joins the sigmoid flexure; and its lower third is not covered by peritoneum. Above the internal sphincter few sensitive nerves go to the mucous membrane, so the rectum may become much distended by feces without marked suffering. Several years ago I attended an old woman for a colic, who had had no evacuation from her bowels for five weeks; and quite recently, in treating a surgical case, the man admitted that four weeks had elapsed since defecation.

A white, circular line at the anus divides the mucous membrane from the skin, and also serves to mark the separation of the external and the internal sphincters. The latter extends about one inch into the gut. When the liver is inactive the portal circulation is impeded and pelvic congestion results. When veins become knotted the valves are useless. Varicosity often commences in the capillaries. Retroversion, retroflexion, and procidentia of the uterus may also produce congestion.

Piles consist of veins, capillaries, arteries, lymphatic vessels, cellular tissue and nerves covered by mucous membrane or skin. They are usually divided into two classes, external and internal; all above the sphincters belong to the latter class. A small external pile may consist of a pediculated vein, filled with coagulum, and this sort is promptly cured by slitting it up with a Syme's lancet and turning out the contents.

Internal veins are generally flat. An area of mucous membrane becomes softened, porous, and varicose. The pressure of straining at stool—any extra pressure—forces blood through the tissues, sometimes to an alarming amount.

The majority of patients are afraid of surgeons, and resort to palliative treatment, the name of which is legion. Absolute cleanliness of the anus and rectum serves both as a prophylactic measure and as a palliative. A sitz-bath in *hot* water (120°) affords some relief to pain. Medicine swallowed—from tar pills

to ergot—is of doubtful reputation, though almost always given more than a fair trial.

I have only found two methods beneficial in mild cases. One is to gently and gradually dilate the sphincters; in this way relieving constipation and checking hemorrhage. The other method is to elevate the lower extremities and pelvis for twelve or twenty-four hours, which relieves the congestion by rest and position. This can be done at night by an arrangement of firm bolsters and cushions, and, of course, the chance of recovery would be increased by continuing the plan all day as well as all night.

But, as a general rule, the best way to treat piles is to remove them. That is the radical method, which saves the patient time, money, and distress. There are several ways of doing this. The old orthodox course was by means of ligatures applied to each pile so tightly as to strangulate them. After eight or ten days of agony the piles dropped off, and the patient was supposed to be cured. This process (not yet entirely obsolete) is frequently followed by retention of urine. The modern method is by means of a clamp and the actual cautery—an improvement on the ligature, but, in my opinion, much inferior to the wire ecraseur. The bowels are thoroughly emptied by a mild cathartic (compound licorice powder or castor oil) and a rectal injection of lukewarm water. Sulphuric ether is administered to the surgical degree. The surgeon's thumbs are inserted into the gut as far up as possible, and both sphincters paralyzed by stretching the parts toward the ischium. This should be done slowly, employing at least five minutes. A small roll of iodized wool, with a string attached, is pushed about two inches up the rectum, as a precautionary measure. If the pile is pediculated, the wire of the ecraseur is applied to the pedicle, and gradually tightened until the included mass is severed. When the pile is sessile, a slight circular incision may be made with a scalpel before applying the wire. The operation should always be performed slowly to avoid hemorrhage. The roll of wool may be withdrawn before the patient becomes conscious. Paralysis of the sphincters is an essential part of this method. It was introduced into America by the late Dr. Van Buren, of New York, and Dr. H. R. Storer, of Boston, and is a preliminary to most rectal operations here. Mr. Bryant, the

celebrated London surgeon, denounces it as a barbarous procedure, but I think that the phrase more appropriately applies to the old method of tying piles. A slight smarting is all that the patient feels after the removal of piles by the wire ecraseur. The operation is finished at a single sitting, and the patient in a week or so is able to resume his usual occupation. No effort should be made to postpone a motion of the bowels, but the external parts must be washed twice a day, or oftener, and *always* after defecation. One of the advantages attendant upon paralyzing the sphincters, is the ready access afforded to thoroughly inspect the tissues, and, should much hemorrhage occur, to control it. In women the rectum can be turned inside out from the vagina, after dilatation of the anus, and in this way internal piles become as accessible as those which are external.

During the last quarter of a century I have operated with the ecraseur on piles twenty-nine times, with uniform success. Of the patients, five were men and twenty-four were women. The amount of blood lost never exceeded three or four ounces, and secondary hemorrhage never occurred. I do not assert that all cases should be treated in this way; but I am sure that it is a safe and easy plan in the majority of cases which come under the care of a general practitioner.

Adler, L. A., Jr., Philadelphia: Palliative Treatment of Anal Fissure. (*The Medical Standard.*)

Some general rules must always form part of the treatment of anal fissure, to lessen as much as possible any inordinate action or distension of the bowel and to prevent the ulcerated surface being irritated by hardened feces. To fulfill these indications enemata or mild aperients should be employed and the diet regulated, bland and unirritating food being enjoined. The diet must depend upon the constitution and previous habits of the patient. In general it should be moderate in quantity yet what the stomach can digest with ease and such as has no tendency to produce constipation.

The patient should take moderate exercise. If the bowels are disposed to be costive, a daily evacuation should be secured by the administration of an enema of warm water, or one of rich flaxseed tea, from half a pint to a pint, given every evening, preferably in

the night-time, as the patient can then assume the recumbent posture, which, combined with the rest, affords the greatest protection from subsequent pain.

Instead of the enema, or in conjunction with it, the bowels may be regulated by some mild aperient, such as the patient has found to agree with him. All drastic purges should be avoided, as more or less stimulating and irritating to the extremity of the rectum. Pain and spasm of the sphincter muscles attending evacuation of the bowels are best relieved by the use of a suppository consisting of:

R Ext. belladonnæ.....gr. $\frac{1}{8}$ to $\frac{1}{2}$;
Cocain. hydrochlor.....gr. $\frac{1}{4}$ to $\frac{1}{2}$;
Ol. theobromæ.....gr. x.

Misce et ft. suppositorium j. One suppository to be employed about half an hour before the enema is given or a movement of the bowel is expected.

Instead of the suppository, an ointment of extract conium may be used, as recommended by Mr. Harrison Cripps:

R Ext. conii..... ℥ij;
Olei ricini.....℥iij;
Ung. lanolini, q. s. ad.....℥xvi. M.

A small quantity of this ointment should be smeared over the parts five minutes before a passage, and again after it has occurred.

The various methods of treating anal fissure may be divided into the palliative and operative. Palliative treatment will meet with success in cases in which the fissure is tolerably superficial and of somewhat recent origin, especially when there is no great hypertrophy of the sphincter muscles. Allingham states that the curability of the lesion does not depend upon the length of time that it has existed, but rather upon the pathological changes it has wrought. He has cured fissures of months' standing by means of local applications when the ulcers were uncomplicated with polypi or hemorrhoids, and when there was not marked spasms or thickening of the sphincters.

It is essential to the success of the treatment of fissure, especially by local applications, that rigid cleanliness of the parts be maintained; for this purpose the anus and the adjacent portions of the body should be carefully sponged night and morning, and

after each stool, with hot or cold water, the temperature being regulated to suit the patient's comfort.

Of topical applications silver nitrate is the best. Its effects are various; it lessens or entirely calms the nervous irritation, which is so important a factor in producing spasmodic contraction of the sphincters; it coats and shields the raw and exposed mucous surface by forming an insoluble silver albuminate; it destroys the hard and callous edges of the ulcer, and tends to remove the diseased and morbid state of the parts. The form in which this salt is usually employed is in solution (from ten to thirty grains to the ounce). The stick may be also used. To accomplish the best results the solution should be used once in twenty-four or forty-eight hours, according to circumstances. It may be applied by means of cotton attached to a silver probe or to a piece of wood. The application is made by separating the margins of the anal orifice with the thumb and index finger of the left hand, and introducing into the anus the probe charged with the solution. The argentic nitrate is to be applied to the fissure only; a few drops are all that is required. If thorough local anesthesia has been induced by the use of cocaine, the application of the silver salt produces little, if any, suffering, for by the time the anesthetic has lost its effect the otherwise acute pain of silver nitrate will have passed away.

After each application the part should be smeared well with an ointment of iodoform (thirty grains to the ounce). The odor of that drug may be disguised by the addition of a few drops of attar of roses. Iodol may be used instead and in the same way, but I prefer the iodoform, owing to its anesthetic qualities. After the ulcer has been touched once or twice with the silver solution the effect will be, in the cases that are benefited by this treatment, a considerable mitigation of the pain from which the patient suffered when at the closet and afterward, and the sore will present a healthy, granulating appearance, and will slowly contract in size.

Some authorities speak highly of acid mercury nitrate, fuming nitric acid, carbolic acid, the actual cautery, etc., but their employment, with the exception of carbolic acid, is attended with more suffering than follows the use of silver nitrate or the simple operative treatment presently to be described. Furthermore, the

application of these remedies is not so certain to effect a cure as either of the two procedures just mentioned.

The daily introduction of a full-sized bougie made of wax or tallow will sometimes act beneficially in case of fissure by stretching the sphincter and producing such an amount of irritation as will set up a healing process in the ulcer. An application of cocaine or of belladonna ointment should be made to the part previously to the employment of the bougie.

In children and young persons, unless a polypus or a polypoid growth or a congenital contraction complicate the fissure, this is almost always curable without operation. In children suffering from hereditary syphilis numerous small cracks around the anus are common, and they cause much pain. Mercurial applications and extreme cleanliness soon cure them, but they will return unless antisyphilitic medicines be taken for a lengthened period.

THOMPSON: WHITEHEAD'S OPERATION FOR HEMORRHOIDS FROM AN ANATOMICAL STANDPOINT. (*Medical Chronicle; Am. Jour. Med. Sciences.*)

After a careful discussion of the blood supply of the rectal region, the author observes that in all cases of piles that are advanced three large pile masses come into view, especially after dilatation. The anterior mass, about half the size of the others, corresponds to the anterior radicles of the superior hemorrhoidal vessels and their anastomoses, with the middle hemorrhoidal and inferior vesicle. The two posterior lateral masses correspond to the lateral trunks of the superior hemorrhoidal and their anastomoses with the inferior hemorrhoidal. A proper understanding of these facts is necessary for the performance of Whitehead's operation. The anastomosis is complete. The veins have no valves, and under ordinary circumstances the greater part of the venous blood passes up the superior hemorrhoidal vein to the portal system, and thence through the liver. Any obstruction causes an excess of blood to flow into the middle and inferior hemorrhoidal vessels. This excess of pressure, with no adequate outlet, causes a distension in their weakest part, which is below, in the comparatively loose cellular layer, and not above, where they are supported by the dense submucous coat. The natural and inevitable consequence is chronic phlebitis, thrombosis, etc. The importance, however,

of this loose connective tissue in which the pile area lies can not be overestimated, for in Whitehead's operation it enables the rectum to be safely separated from the surrounding tissues with but trifling hemorrhage and absolutely no damage to the sphincter muscle. Whitehead's operation this author describes as follows:

The patient is prepared by enemas and antiseptic precautions, and thoroughly anesthetized, the sphincter thoroughly distended, with the patient in the lithotomy position, and forceps are placed on each of the pile masses. With a blunt-pointed pair of scissors the junction of skin with mucous membrane around the anal margin is carefully divided, a few snips bringing us into the cellular interval. By passing the finger into this space, either by itself or with the aid of the scissors, the mucous area is drawn down by the attached forceps in the form of a tube. It is then slit up the side and partly around. This cut edge is then sewn to the skin margin by silk sutures. The circular cut is then continued and then sewn again, and thus, step by step, as it is cut the mucous membrane is sewn to the skin. Twisting or tying usually suffices for the slight bleeding encountered, but sometimes the modified Staffordshire knot of Dr. Sampson, placed in the supply of the pile area, will be of service. This can be done after the dissection of the mucous membrane. The author insists upon the importance of opening at the beginning of the operation the "peri-anal" space, and believes that failure to do so will cause later more or less injury to the sphincter and incontinence.

Philpott, F. B.: Hemorrhoids. (*Med. Brief.*)

There has been so much written about the treatment of piles, and so many operations have been suggested and performed for their radical cure that I am constrained to say a few words in regard to their cause and cure, with report of two cases. Hemorrhoids are caused by pressure on the veins which return the blood from the rectum. During the act of defecation there is more or less straining to empty the bowel of its contents. At first the tumor returns itself or is easily returned within the sphincter, but if the pressure is applied frequently the mucous lining and subjacent tissues become paralyzed, as it were, and

the tumor becomes permanent. Remove the pressure, prevent the straining, and the hemorrhoid is radically cured. The pressure comes from a *loaded* colon.

Case 1. Not long since I had charge of a case in the person of an old gentleman, seventy-five years old, who had suffered from this trouble for nearly fifty years. He had formed the habit of using a syringe every time he went to stool. He had frequent attacks of hemorrhage, sometimes so profuse as to seriously threaten his life. He was hardly able to stand alone when I saw him. I checked the hemorrhage with astringents, and commenced giving him cathartics, and had the satisfaction of seeing a *cure*. To-day, six months or more after I discharged him, he is well. Has had no recurrence of his trouble. The case was also complicated with prostatic abscess, which discharged freely *per urethra*. I gave him as a cathartic a tablespoonful of castor oil in a seidlitz powder every three hours until I got his bowels to discharging freely, when the time between doses was lengthened and continued for a week or ten days. After nearly every action the tumors had to be returned by an attendant. Thinking he was empty by this time, I stopped the remedy for a week or two. The discharges became watery again, and I put him on the oil and seidlitz powders, and continued them until the discharges were healthy and of recent formation, when the tumors had disappeared and the rectum was in a perfectly healthy condition. You would be astonished at the amount of fecal matter passed by this man. I told him I thought some of it had been there for twenty years. He is well.

Case 2. Was a male about fifty-five years old, who served throughout the late war in the Confederate army and contracted diarrhea. He has suffered ever since at times with piles. The tumors became hard, and several times he had them incised, which relieved him for a while. I put him on castor oil for two or three weeks, then added seidlitz powders, as it is a more palatable way of giving the oil, and had the satisfaction of seeing the tumors disappear and the actions become natural and free. All such cases have loaded colons, which require from one to two months to unload.

In both above cases I gave the oil from three to five times daily in a seidlitz powder until actions were healthy.

MONTGOMERY, E. E.: FISSURE OF THE ANUS. (*Kansas City Medical Index.*)

The patient, a woman, aged fifty-two years, had never been strong. She had complained for some time of severe, gnawing pain in the sacral region, burning pain in passing urine, sometimes passing the latter involuntarily. Present symptoms, headache, weak back, a burning pain in lower part of sacrum or about the coccyx. On examination no evidences of thickening are found, but there is seen a slight fissure or ulcer within the margin of the anus. This may be the cause of the coccygeal and urethral pain. In every case of pain during or following defecation, and with the history of occasional bleeding at stool, patients should be examined for the existence of fissure.

The pain is not infrequently so marked that it leads the patient to avoid going to stool as long as possible, until the bowels become so loaded with fecal matter that the evacuation is attended with most severe pain, and fissures are thus continued and aggravated. The reflex symptoms are no less marked. Not infrequently cases of vaginismus are due to presence of fissure, and very often it causes frequent and painful micturition. For a condition that is so painful it is one of the most readily relieved by proper treatment. This consists in placing the patient under an anesthetic, introducing two fingers into the bowel and stretching it until the sphincter is paralyzed. The patient may have an incontinence of feces for a few days, but soon recovers. By the time the sphincter has recovered its tone the fissure is healed. For irritation in this region, ichthyol ointment, dram to the ounce of vaseline, affords relief from pain and promotes healing. The importance of proper care of the rectum can not be overestimated, and the examination of the intestine should be the routine procedure in every patient who comes under observation for the first time.

DUKE, DR. ALEXANDER: VALUE OF STRETCHING THE SPHINCTER ANI IN CHLOROFORM COLLAPSE. (*Lancet; Medical and Surgical Reporter; St. Louis Med. Era.*)

In the sad list of deaths from chloroform, in which the various means adopted for resuscitation, unfortunately ineffectual, are enumerated, I observe no mention of one of the most val-

uable, in my opinion, viz., dilatation of the sphincter ani. This proceeding has been, I understand, in use in America for some time past, and is highly spoken of by Dr. Daily in the New York Medical Times, February, 1893, as effective in cases of morphine poisoning.

I had lately an opportunity of putting to the test this plan of treatment in the case of a patient almost moribund after chloroform administration. The usual means having failed to obtain any response, I introduced my thumb into the anus, and forcibly drew the sphincter toward the coccyx. This had the immediate effect of rousing the patient sufficiently to gasp and cry out, and when repeated later on, as she showed signs of relapsing into the former condition, she so far recovered as to protest in a marked way against its repetition.

Dr. Daily's plan is to use a bivalve rectal speculum, and by its expansion to stretch the sphincter. As the speculum may not be always at hand, I think the finger (or thumb, being stronger) will be found to effect the desired result. Of course, one case does not prove much, but observation of its immediate effect in stimulating the respiratory functions, as stated in this paper, leads me to think it a most valuable and harmless proceeding. The sphincter ani being the last portion of the body to give up its sensibility, the converse must be equally true, hence the importance, to my mind, of adopting this plan when the patient after an anesthetic shows signs of collapse.

I trust that trial will be made of this American doctor's valuable suggestion, as I am convinced its importance is not known, and may be the means of saving life when the usual treatment has failed.

Reclus, P.: The Conservative Treatment of Hemorrhoids. (*Gaz. des Hôpitaux; Am. Jour. Med. Sciences.*)

The author treats painful hemorrhoids by sitz-baths and washing with water at a temperature of about 120° to 130°, and believes that their worth is far greater than that of cold baths. Before and after defecation the patient should insert into the anus cotton tampons soaked with a two-per-cent. solution of cocaine. As the first operative procedure he recommends dilatation, but not the digital, but by means of Trélat's two-bladed speculum. Gen-

eral narcosis is unnecessary. A tampon soaked in a two-per-cent. cocaine solution is placed in the ampulla recti for three or four minutes. Then he injects into the sphincter ani itself in different places one hypodermic syringeful, one dram of a one-per-cent. cocaine solution, which produces full anesthesia in a few minutes. The speculum is then introduced and opened to the maximum.

The author has used this method in sixty cases, with but one troublesome case. All the other cases were permanently cured. Incontinence never followed, and in only one case was there relapse. In such cases an operation is the only recourse, either with the knife or scissors. This can be accomplished from local anesthesia by cocaine. The author had operated with success in thirty cases in this manner, and in only one was there a complication, a secondary hemorrhage, which was easily controlled by a deep stitch. He believes that extirpation should be the last resort, and that the other methods should be used in the order described.

Jones, Robert, Liverpool: A Simple Method of Treating the Wound after Excising Hemorrhoids. (*Provincial Medical Journal; Edinburgh Medical Journal.*)

The author recommends that in those cases of hemorrhoids which are suited for treatment with the clamp and cautery that the latter instrument be dispensed with. The hemorrhoid is placed within the clamp and cut off, leaving about an eighth of an inch of pedicle. This cut edge is sewed with a continuous catgut suture, the clamp removed, and the operation is complete. He does not intend to use the cautery again, except in the case of friable granular hemorrhoids.

Leloir: Electricity in Pruritus. (*Jour. de Med. de Paris; Review of Insanity and Nervous Diseases.*)

Good results were found in pruritus of all types, anal, vaginal, and general, from the use of the electric breeze from the static machine.

GASTRO-INTESTINAL DISEASE.

GUNN, N. D.: GASTRIC NEURASTHENIA. (*Montreal Medical Journal.*)

The subject which I have chosen is one that can be but very imperfectly handled in one paper, so that instead of attempting to go completely over the ground I select cases representing two or three of the commoner forms of this interesting malady, and hope, with the permission of the society, to supplement later on this small contribution.

To fully appreciate the importance of our subject it is necessary to remember the gross and minute anatomy of the stomach, with special reference to the nerve supply. This hollow muscular bag is suspended in the abdomen in such a way that it is capable of great movement, so that each change in posture of body has a corresponding change in the stomach.

Besides these extraordinary movements the stomach has others which are mainly peristaltic, the wave passing from the pyloric end along the greater curvature to the cardiac. There is also a small return wave along the lesser curvature.

It is by these complex motions that the food is brought into contact with the mucosa, and it is quite probable that the movements are for the most part specific and not originated by impulses entering by the nerves, the latter acting only to bring the stomach into concerted action with the rest of the body.

The nerve supply consists of the two vagi, numerous fibers of the splanchnic branches of sympathetic. Intrinsic ganglionic cells belonging to Meissner's and Auerbach's plexuses, and possessing the same arrangement as that found in small intestines, are of much interest and importance; the more so, as Jurgens, of Berlin, has lately demonstrated degeneration in these ganglionic plexuses in certain neuroses of stomach.

Experiment shows that the sympathetic has nothing to do with the movements, as section and stimulation are equally disregarded by this viscus.

When the vagi are cut the movements still go on, but in a more or less eccentric manner; thus it seems that the vagi merely preside over the rhythm without actually carrying the impulses that set the mechanism in motion.

Need it be wondered at, then, that in an organ so independent as the stomach, with a nerve arrangement so complex, that we have nervous disturbances dependent on and sometimes confined to this viscus. The great wonder is that for many decades after the renaissance in medicine no thought was given to the possible relation of digestive disturbances to the nervous system. Catarrh and inflammation were then the *sine qua non*, the beginning and the end of all disorders, and when it was impossible to relegate the disorders to either of these categories, the physician satisfied himself and the patient by the most vague of terms, "acute or chronic indigestion."

I wonder how many physicians of to-day look at the tongue, inquire about the bowels, diagnose dyspepsia, and lean back satisfied with themselves and the impressions they make on their patients. It is a fact that too many in all the sciences are looking too much at effect and not enough at cause. How many in our profession can prescribe a tasty and finely colored mixture who have not yet learned the amount of solid and liquid food necessary to maintain the functions of body in health for twenty-four hours!

As late as 1878, Leube, who is father of the advances made in this line, concluded that many disturbances, found especially in women, which heretofore were called catarrh, are truly of nervous origin; and to substantiate his contention he gave the ordinary test breakfast, and after digestion began he examined the contents and found that in many of these cases digestion proceeded and continued perfectly normal. Yet, accompanying this act, certain symptoms developed, as headache, dizziness, palpitation, and others referable to the digestive tract, such as belching, eructations, yawning, hiccough, gaping, griping, etc. Leube argued that there must either be a poison generated and absorbed or the nerves of the stomach must be hyperesthetic.

As the disturbances began almost immediately food was taken, he concluded, rightly enough, that the poison theory was untenable and that hypersensibility was the only sensible explanation.

It is somewhat difficult to understand that these disturbances, coming often without any apparent cause, should affect the stomach, but few, if any, have a perfectly balanced nervous system, and vulnerable points are to be found, if sought, in every indi-

vidual—points that respond too fully or too feebly; no resistance, no inhibitory power—nerve-storms sweep over them like the wind over the high seas. Weak by nature, weakened, perhaps, by excesses, what wonder that the stomach may, like other organs, call to us aloud. To-day it is admitted, by all who have studied gastric diseases, that there exists a well-marked neurasthenia which admits of classification according to the function disturbed, so that we may distinguish motor, sensory, secretory, and perhaps vaso-motor disturbances, the latter because it is possible theoretically, though no cases have been reported so far as I know, and would no doubt be very difficult to diagnose, unless cases which are characterized by great faintness and pallor be put in this class.

I will now give a history of two cases as taken from note book, the first being a type of what is known as anorexia nervosa.

Mrs. R., aged thirty-six, came to office complaining of pain, as she called it, behind the eyes. I examined and found no impairment of vision. I then went into the case more fully, which is as follows:

Patient tall, angular, and fair complexion; never was strong, and since marriage worked unceasingly; bad family history—father, mother, two brothers, one sister, an uncle and aunt dying of pulmonary tuberculosis.

She was mother of six children, all showing more or less scrofulous habit, one being sorely afflicted with tubercular adenitis.

Physical examination showed a poorly nourished woman with long chest, projecting scapulæ, soft, bloodless skin and flabby muscles, areolæ about the eyes, pinched lips, etc. She looked as if she longed for a transition to some happier clime. To a casual observer it would seem as one ready to lie down and die but for duty to husband and family. Lungs and heart normal; urine pale, no albumen, no sugar; bowels regular, as a rule, sometimes a slight diarrhea; tongue pale, clean, and flabby. Appetite was entirely absent, never eating any thing except when forced to by the family. Many days she worked without any thing more than a cup of tea. She had not tasted meat for two years, bread and potatoes being her chief diet. She was not hysterical and by no

means verbose; in fact, were it not for the pain about the eyes, she would not think of consulting a physician. Rest with forced feeding effected a cure without medicine.

I have here detailed the history of a case who from birth was weak and whose surroundings were not of the pleasantest.

J. Matthews Duncan says: "A good example of this trouble is one of the most ghastly spectacles you will meet with in practice, but the sadness of the picture is relieved by the fact that they always get better."

There is no wish for sympathy, as is found among hysterical patients—*au contraire*, they seek seclusion and say very little. The mental faculties remain unimpaired, in fact it seems as if in some the perceptive faculties become more acute and the reasoning more incisive.

Physically the case is still more wonderful, for the amount of exertion these patients are able to undergo is simply astonishing. They delight in long walks in lonely places, away from the annoyance of sympathizers and friends. If engaged in household duties they pay strict attention to every detail. They sleep well and are not melancholic as a rule, and when forced into company are not by any means disagreeable companions, for they never burden you with woes and heart-rending stories of misery and wretchedness.

This distressing condition must have an end, and often suddenly. The collapse comes, the tension is relaxed, the nerve-storm has spent itself, and kind nature, ever ready to assert itself, comes to the rescue. Inviting dishes, prepared by solicitous friends and forced upon a submissive patient; rest, the greatest of all therapeutic agents; the change in habits which illness often brings, always succeeds, in spite of the nauseating mixtures prescribed, in restoring the health.

Case 2. This is another sensory disturbance, but I mention it as showing that a sensory neurasthenia may be preceded by a motor pathological equivalent, so to speak. Mr. G., aged forty-five, book-keeper, complains of severe pain in stomach about, as he expresses, two hours before meal-time or three to four hours after eating. Especially liable to these attacks after any worry, and they usually persisted for some days.

Family history good; personal history interesting. From

puberty up to time he had left England for a sea-faring life, at age of twenty-two, he was troubled for two hours after eating with regurgitation of food, which he chewed again and swallowed, this being a true rumination. This stopped when he entered the navy, and he never had any stomach trouble again until he left the sea.

Upon leaving the navy he changes his active for sedentary habits and assumes the responsibility of book-keeper in a large firm; soon he begins complaining of stomach pains, and I saw him first on April 10th, when he presented the following history:

Highly nervous temperament, dark sallow complexion, fair muscular development, but no subcutaneous fat; all organs normal, no tenderness over epigastrium; tongue clean, bowels regular, urine normal; gastric juice as taken after test breakfast about normal as to amount of hydrochloric acid, and digestion with this fluid seemed to go on very rapidly. This was clearly, then, not a case of hyperesthesia, but rather of gastralgia. This is a unique case, so far as I know, for here we have a well-marked example of two distinct neuroses in the one stomach at different times.

General Treatment. It is first always necessary to determine whether the case belongs to the irritative or depressant form of neurosis, also how far the general bodily health needs toning up. In the irritative forms, shown by pain, vomiting, etc., opium and its alkaloids are our sheet-anchors, belladonna, hyoscyamus, chloral and other sedatives acting sometimes very well.

Washing out the stomach, as first recommended at Kussmaul's clinic, often relieves when every thing else fails, and it is advisable in all cases that resist for any length of time the influence of drugs to try the washing.

Change of air very often does well; going from a low to a higher altitude and *vice versa*, or from a warm to cooler climate; sea voyages, sea bathing; changes of occupation, as from a sedentary to active life.

In the depressant forms, stimulants and forced feeding. Forced feeding must often be done by means of a tube, as the patient frequently loathes the sight of food. In such cases gavage, as recommended by Dujardin-Beaumetz, is the best method. This is carried out by means of a short rubber tube reaching

down the esophagus to a point opposite cricoid cartilage. Food should be liquid and introduced slowly to prevent vomiting. The amount of food *per diem* for an adult varies within wide limits, but it is always best to begin with a good deal and await developments. Wiessner recommends 100 grams of albumen, 150 grams of fat, and 300 grams of carbo-hydrates. This is represented by two quarts milk, two ounces butter, six eggs, and three and a half ounces sugar. Feeding, as a rule, has not to be continued very long, for when patients find that digestion proceeds regularly they get encouraged and begin to eat of their own accord.

The argument first used and still used against forced feeding for weak stomachs seems hard to answer. But as a weak heart, weak lungs, weak muscles are aided and strengthened by exercise, why can not the same argument apply to the stomach?

Experience has proven that from forced feeding, and it alone, can we expect to get good results in the depressant forms. In the irritative forms, such as vomitus nervosa, forced feeding by the stomach is almost a fatal error, and we must rely on sedatives and enemata; so that care must be taken in our diagnosis.

Each group of cases has its own peculiarities, and must be treated accordingly, and the physician who sticks to the one rut and changes not will often meet with failure. It is in neurotic patients that individual idiosyncracies must be studied and treated. Patience, firmness, and tact in the physician are most essential attributes in dealing with these cases.

Paquin, Paul, Lebanon, Mo.: The Washing and Disinfection of the Alimentary Canal. (*St. Louis Medical and Surgical Journal.*)

Gastronomy must be considered the chief factor in producing most affections of the alimentary canal. If a man was content to partake of just enough of substantial nourishment, without catering to his inherited and created appetites, which have resulted from civilization, diseases of the alimentary canal would be very scarce indeed, and hence numerous other dependent maladies would be absent. But, unfortunately, eating is an art nowadays. The *chèfs de cuisine* are devoting their energies toward the development of our appetites by the production of all forms

of dishes that please the palate, but play havoc in the abdomen, and thence produce numerous disorders. It has become necessary, therefore, for medical science to counteract the effects of the miserable practices, the indigestible foods, and the evils produced. The quantity of food ingested at each meal by most people is, on an average, more than half the requirement for the nourishment of the body, the repairs of the tissues, sustenance of life, and its energies. We fill the stomach with pounds of meat, bread, potatoes, peas, corn, milk, cream, pudding, pie, ice-cream, coffee, and sometimes wash the whole thing down with beer, wine, or water, never thinking that the greater portion of this great mass must be digested in the stomach, and that this organ, having a small and limited capacity, must push out into the alimentary canal a great portion of food-stuff undigested. This is destroyed in the bowels by fermentation and the production of irritating gases and toxic substances which are absorbed by the nerve centers and the economy in general. By this method the stomach is overtaxed, fails to digest properly even the food which is left in this organ, and it begins to ferment there, producing by degrees a condition very common nowadays—the distension of the stomach and chronic dyspepsia, so-called. As a result of this universal practice of overfeeding, there is scarcely a person in the civilized world with absolutely sound digestion, and the medical profession is becoming more and more taxed with chronic invalids whose condition may be traced to improper digestion and disturbed digestive organs.

Among the most important treatments of the day for the rectification of these troubles are irrigation and disinfection of the alimentary canal. In the institution of such treatment one should first, of course, have made a good chemical and microscopical analysis of the stomach's contents, in order to establish the nature of the secretions, etc. It must be known whether it is acid or alkaline, and if it is microbic, and to what degree these conditions exist. It should be known also, as near as possible, if there is an organic disease about the stomach or elsewhere in the alimentary canal. These points being understood, the patient may then be placed on a protracted treatment with good grounds for hope of successful results, unless some organic disease exists. The washing of the stomach should be practiced sometimes every

day—in the morning and evening, four or five hours after meals; sometimes only once a day—in the morning or evening; sometimes only two or three times a week, according to the conditions to overcome, is sufficient. And then if there is a microbic affection it may be necessary to use a non-irritant, non-poisonous germicide, among which, for the stomach itself, hydrochloric acid is very useful. At the same time the alimentary canal below should be irrigated, and even disinfected if necessary, using for this purpose a colon tube about five feet long, perforated at the end, and introduced carefully, the patient being in the elbow-knee position, until it has entered several feet into the colon, and the fluid has carried out all the material, and the water comes away clear. The temperature of the water to be used in the intestine should be about 80° F. In the stomach it may vary from hot to cold, according to the conditions present.

It is not my purpose in this short article to explain the details of irrigation and disinfection of the alimentary canal, but merely to bring them to the attention of those who consider them beyond application by general practitioners. It is true that at a sanitarium, where we can control our patients continually and regulate the diet, even to giving several days of complete rest to the stomach while we feed the patient by enemata, it is much easier to control patients and reap good rewards for our trouble. But still the details of treatment are not out of reach of the practitioner. I believe it will repay any doctor to make a careful study of the rest and water treatments for alimentary troubles. Naturally one would have to study the results of the experiments and experience of those who have had long and varied opportunities to get the most benefits, but the trouble would be well repaid by the success attained afterward.

I have omitted to say a word about dietetics, but, of course, it must be understood that proper diet is a necessary adjunct to hydrotherapy and disinfection in diseases of the alimentary canal. And by proper diet I do not mean an empirical or theoretical one, but a *menu* based on science—on facts revealed by positive tests of the condition and capacity of the digestive tract. This presupposes a fair knowledge of dietetics and a good one of physiology.

CAIRD, F. M.: GASTROSTOMY AFTER THE METHOD OF WITZEL. (*Edinburgh Medical Journal.*)

Gastrostomy is usually undertaken when the esophagus only permits the passage of fluid food with difficulty, and when the patient's strength is already giving way. The mortality associated with the operation was formerly great, partly owing to the shock consequent on the low vitality at the time, and partly from the contamination of the peritoneum with gastric contents.

An advance was made, however, when surgeons began to advocate earlier interference, and when the operation was carried out in two stages, so that the opening of the stomach was deferred until adhesions shut off the peritoneum. Under the more favorable auspices created by increased familiarity with peritoneal surgery, it was soon recognized that the danger of septic infection might be avoided, and that the stomach might be opened at once, if it were secured with sufficient firmness to the abdominal wall, and the peritoneum perfectly occluded, so that neither was there chance of the stomach breaking loose if vomiting occurred, nor yet the fear of breaking down adhesions when feeding the patient.

As the result of a successful gastrostomy, the contents of the stomach, fluid and gaseous, were liable to escape; the adjoining skin was frequently excoriated, and the patient was sometimes far from comfortable. Moreover, in cases of simple stricture, if the esophagus regained its function and became permeable, the closure of the fistula involved subsequent surgical interference.

Ingenious procedures were accordingly devised to perfect a gastrostomy wound which should act like a true mouth, or like a valve, and obviate the distressing leakage. Among these may be mentioned the methods of Von Hacker and of Girard, in which a sphincter is formed from the fibers of the rectus muscle; or those of Hahn and Ssabanajew, where, by the projection and opening of a fold or diverticulum of stomach wall between the ribs, or through the soft structures and skin above the level of the original wound, a valve-like mouth is constructed at a higher level than in the ordinary gastrostomy.

It would appear, however, that the most satisfactory plan is that which follows, introduced by Witzel, of Bonn.

The patient is anesthetized, and the customary antiseptic precautions observed. The usual incision is made, the rectus split

along the course of the fibers, its sheath and the peritoneum opened. The stomach is then sought for, seized by the fingers, and a portion of the anterior aspect as large as the palm of the hand is pulled out at the wound, and packed around with sterilized gauze, moist and warm. The surgeon next opens the stomach. He selects a spot near the lesser curvature, free from vessels, and makes a small incision about one fourth inch in length. He has in readiness about two feet of red rubber tubing, in diameter equal to that of a drawing pencil, and slips about one inch of it into the stomach through the incision, which it accurately plugs. Should there be any excessive bleeding, it may be arrested with the catgut suture which serves to fix the tube provisionally. Care must be taken to wipe up any escape of fluid from the stomach. The tube, which hangs across toward the greater curvature, has now to be secured in position, and a species of artificial esophagus formed. This is managed by the surgeon raising a fold of stomach on each side of the rubber tube with a series of interrupted silk Lembert sutures, on tightening which the tube is buried for about two inches of its length in the folds. Two or three similar sutures beyond the sunk extremity of the tube effectually shut off the new esophagus from the peritoneal cavity at the further end. A little sterilized iodoform powder is rubbed over the stitches, and a second similar series of sutures are put in over the first to promote the efficient union of the serous surfaces over the tube. The stomach should now be returned and secured to the abdominal wall. Before returning it a few loose sutures may be passed through the folds and outer portion of stomach wall at the free extremity of the rubber tube; and on replacing the stomach the loose sutures are employed in fixing it to the abdominal wound, which may now be closed. The surgeon there and then attaches a funnel to the rubber tube, and runs in as much food as he thinks necessary. The whole operation may be easily completed within thirty minutes.

The sutures should be of fine silk, preferably black. If the stomach can not be easily brought close against the abdominal wall, a provisional tampon of iodoform gauze is used until adhesions form.

The result obtained is most gratifying. The patient speedily learns to feed himself, and there is not the slighest fear of any

regurgitation of food through the wound, since the tortuosity of the new channel and the valve-like action brought about by the contraction of the stomach entirely preclude any such possibility. The tube should be removed about once a month. In order to avoid any difficulty, it is well to cut off the free surplus of the old tube, and pass a long-eyed probe into the stomach through the portion that remains, which may now be removed. The new tube should be strung on a silken thread, the end of which is now to be attached to the probe, and so one readily slides the new tube over the probe onward into the stomach, and, pulling on the silk, thereafter withdraws the probe. Should the esophagus again regain its function, as in cases of cicatricial stricture, it is noteworthy that on withdrawal of the tube there is never any outflow of fluid, and the fistula rapidly heals.

The autopsy in cases examined several months after the operation has shown that the new canal gradually shortens, straightens, and its walls become thicker. The inner extremity is found guarded by a funnel-shaped arrangement of concentric folds of mucous membrane, or it projects inward something like the ileo-cecal valve or entrance of the ureters, thus presenting an efficient valvular defense against escape of the stomach contents.

Several points may be further illustrated by a case.

E. F., aged fourteen, servant-girl, was admitted to the Royal Infirmary August 17, 1893; complains of inability to swallow. She was miserably emaciated; had sunken eyes; pale, hollow cheeks; an anxious expression. Pulse weak and small, and temperature 97°. She was herself too weak to give any history. Her sister states that five months ago the patient swallowed a mouthful of strong solution of washing-soda which she found in a lemonade bottle. She at once felt extreme pain, fainted, and three hours after began to vomit. She has been in bed ever since the accident, suffering from difficulty in swallowing, which has steadily increased. During the last three weeks she has taken hardly any food at all, and for the last seventy hours not even fluids have been swallowed. Within the last three days a great change has occurred, and she is much weaker. On the morning after admission Witzel's operation, as above described, was performed, since her condition appeared critical. Three ounces of switched egg and half an ounce of brandy were at once passed

into the stomach; feeding with egg and milk was afterward carried out every four hours. She rapidly improved. The wound was dressed once or twice, and she got out of bed on the fourteenth day. On this date she weighed four stone two and a half pounds. She gained at the rate of about one pound per week. During one week, when she was specially active, she lost one pound. Her temperature remained still subnormal. At the end of four weeks she was ordered to masticate and pass all her food and fluids through the mouth before sending it through the tube into her stomach. At once she began to put on flesh, her temperature rose to normal, and she gained ten pounds in a fortnight. Since that time she has gained about three pounds a week, and now weighs about six stone. At present she is healthy, active, and well. She suffers no inconvenience whatsoever beyond that at meal-times. Not a drop escapes along side the tube; closure is perfect; and the clamp on the tube prevents any regurgitation during exercise, coughing, or laughing. A very small quantity of liquid can be swallowed, but the stricture, which is situated about ten inches from the mouth, defies our best efforts, and not even a filiform bougie has yet been passed.

A second case, in a male aged forty, who suffered from impermeable cicatricial stricture, also gave a successful result. The patient died from chronic lung mischief two months after the operation. There was no section.

In conclusion, we might again press the claims of this operation upon the practitioner. It offers such certain relief to the unfortunates who suffer from esophageal stricture, with such slight risk, and the after-result is so satisfactory, that it gives additional arguments to urge in favor of early operative intervention. Moreover, the principle involved in this operation of Witzel is so valuable, and so capable of modification and application to the other hollow viscera, that it is a welcome addition to our surgical methods. It is to the excellent results seen in the hands of Prof. Mikulicz, in Breslau, that the writer owes his introduction to the benefits of Witzel's gastrostomy.

Bell: Two Cases of Appendicitis. (*Montreal Medical Journal.*)

At the Montreal Medico-Chirurgical Society the author pre-

sented two specimens. The largest part is the apex, and the smallest that nearest the cecum. The apex was near the liver, and as he pulled it out he thought that he was pulling something wonderfully long. It was near the apex that it was diseased, so he was not particular about removing it close to the cecum. It was removed for recurrent attacks of appendicitis. The first attack was one year ago last January, another attack in November last, and a series of attacks since then, never fully recovering from any of them, and lasting until Wednesday week, when he was operated upon. It was clearly one of those cases of catarrhal appendicitis. The patient at first declined operation, and it was not urged. He went away, but, being unable to work, returned with a sausage-like mass in the line of the ascending colon. There was no pus, nothing but adhesions, which made it difficult to separate the swollen point of the appendix.

The other specimen was removed last night at 10 o'clock. It shows a gangrenous appendix. It is one of the earliest operations he had any knowledge of. The patient went to his work on Wednesday morning; some time during the morning he was attacked with a pain in his side, but worked all day. He sent for a doctor during the night, and was operated upon before 10 P. M. the following night, within thirty-six hours from the time of his first symptoms, and twenty-four hours after leaving his work. The middle portion of the appendix was quite gangrenous, but there was no pus about it, it was the separation of the adhesions that caused the gangrenous portion to give way. It lay curled up behind the ascending colon and was gangrenous in its middle portion. No concretions were found.

Both patients are doing well, but the patient from whom the first was removed contracted a pneumonia, from which he has recovered.

Mixon, J. W.: Chopparro Amargoso, A New Treatment for Chronic Dysentery. (*Texas Sanitarian*, August, 1893; *Virginia Medical Monthly.*)

Osler, Dock, Steingel, Eichberg, and many others ascribe dysentery (both acute and chronic) as due to the presence of the *ameba coli.* The ameba coli is also present in all cases of hepatic abscess following dysentery.

Chopparro amargoso is a small, thorny bush, which grows in Southwest Texas in thin mesquite land, classed in its natural order, *Simarubaceæ* (same order as quassia and simaruba). All parts of the bush possess medicinal virtue (except old stock). "*Todos es bueno*" root is the name used by the natives. The bark, leaves, thorn, flowers (pink), and fruit (cherry-red when ripe), all have the characteristic and intensely bitter taste. The tendril, which possesses the most active principle, is the part generally selected. It yields its virtues to boiling water (two to four ounces to the gallon of water for the decoction), requiring about two hours. Messrs. Sharpe & Dohme, of Baltimore, made, at his request, a fluid extract, the dose of which is ♏x to ʒss as a tonic; ʒiij to ʒj as a stimulant. The active properties in this drug are due mostly to a bitter principle, an alkaloid, which has not been isolated. Although *chopparro amargoso* is so intensely bitter, it seldom produces nausea, but acts as a palliative to the whole alimentary canal. This bitter may be overcome to some extent by skillful pharmacal manipulation.

Two years ago his attention was called to *chopparro amargoso* by Dr. Champion, of Luling, Texas. He said it was a Mexican domestic remedy of great repute in the treatment of bowel troubles, especially adapted to chronic dysentery, the most intractable form. It seems to remove the dysenteric symptoms.

In large doses of fluid extract, ʒiij to ʒj, the effect is that of a diffusible stimulant. The face flushes, the head feels a little full, with no ill effects following. The toxic dose, if any, has not yet been ascertained. The drug does not purge, neither does it constipate the bowels if taken in health. It is principally eliminated by the kidney, as the odor can be detected in the urine, though it has no observable effect on the kidneys. When given in dysentery it acts as a palliative, but not as an anodyne like opium. It has some antiperiodic properties which might be a desirable feature in the treatment of malarial dysentery. It may be of service in typhoid fever as an intestinal germicide and tonic; it might also be useful in dipsomania on account of its stimulating effects.

He reports a few cases treated with this remedy, to give some idea of its value, and then concludes:

"I could report many other cases successfully treated by myself and others, but deem the above sufficient to show that, in

my opinion, we have in this native drug a valuable remedy for dysentery.

"It is said that General Taylor's army, on their return from the invasion of Mexico, in 1846, contracted 'camp-flux,' owing to bad hygienic surroundings, which proved very intractable to regular treatment; they were induced by Mexicans to try *chop-parro amargoso*, which proved to be very effective in arresting the disease."

MILLER: ASCARIS LUMBRICOIDES IN AN INFANT AGED THREE WEEKS. (*Jahrbuch für Kinderheilkunde*, B. xxxvi, H. iii; *Archives of Pediatrics*, January, 1894.)

The patient, an inmate of the Moscow Orphan Asylum, developed gangrene of the umbilicus, which extended into the abdominal cavity and involved the gut, establishing an artificial anus from which feces and gas escaped. At the end of the third week a round worm, eighteen centimeters long and four millimeters thick, was found under the dressings protruding through the opening. The author was unable to find in the literature records of the round worm as having occurred heretofore in so young a child. Heller found the oxyuris vermicularis in an infant five weeks old. Ammon expelled by means of calomel a tenea solium from a newly-born child. It is most probable that the child was infected the first three days of life from impure milk or water, as after this time the infant was wet-nursed.

The case is of interest in that it demonstrates the exceeding rapid growth of the round worm. As regards the number which may be present in the individual, Volz reported a case in which nine hundred ascaris lumbricoides were passed in the course of a few months. Steinberg knew of a child who passed five hundred through an intestinal fistula in the inguinal region. Petit had a patient who passed twenty-five hundred in five months. Fanoneau and Dufresne reported a twelve-year-old boy who passed five thousand one hundred and twenty-six in three months. Seibert reports a case in which a round worm had crowded into the ductus communis choledochus, causing general hepatitis followed by abscess of the liver with rupture into the pleural cavity.

Fifty fatal cases have been reported in which the worms pentrated this duct, twelve of which were children, and in some of

these worms formed the nuclei of gall-stones. They have been known to cause typhlitis, perityphlitis, and general peritonitis. The larynx has been invaded, with resulting asphyxia and death; they have descended into the bronchi, producing pneumonia; they have been found in the nose and in the communicating cavities, in the antrum of Highmore, and in the frontal sinus; otitis and perforations of the membrana tympani have followed their entrance into the eustachian tube. Kent and Fairlaugh report a boy in which fifteen to twenty round worms escaped daily through the nose, ears, and inner angle of the eye through the lachrymal duct.

Park, Roswell: The Importance to the Surgeon of the Bacillus Coli Communis. (*New York Medical Record.*)

The literature relating to the colon bacillus was thoroughly reviewed and evidence presented showing that this organism, which is constantly present in the intestinal canal, is not always a harmless inhabitant, but becomes at times an active invader, and does not confine itself to the intestinal mucosa, where it may set up most active desquamative lesions, but may pass this barrier and penetrate into the general circulation, and exercise pernicious activity in numerous other organs and toxic effects upon the system at large.

Herniary cholera, so called, is due to intoxication from the products furnished by the organism in a virulent condition. From the intestinal canal the colon bacillus may ascend along the biliary passages, determining lesions in the gall-bladder or liver. It is known to be one of the frequent factors in peritonitis of intestinal origin. In the kidneys as well as in the bladder the colon bacillus may exert pathogenic properties. The organism may be introduced from without, as upon a catheter, or may be transferred from its normal habitat by some traumatism of the natural channels. The endocardium, the meninges, the pleura, articular serous membranes, and the lungs are at times not exempt from the manifestation of its activity. It is probable that there is a form of post-operative septicemia due in no direct way to the operator or operation, but is in fact what has often been called an entero-sepsis, and due to the migration from the intestinal canal of the colon bacillus. Constant attention to the

intestinal canal should therefore be the watchword of the surgeon both before and after operation.

The author reported six cases from his own practice in which the colon bacillus was found, and in some instances it was the only organism present. The cases were as follows: (1) Cancer of intestine with abscess; (2) recurrent peri-appendiceal abscess; (3) acute abscess of the liver; (4) gangrenous appendicitis, with perforation and obstruction of the bowels; (5) cholecystitis suppurativa.

MILLIKEN, S. E.: BASSINI'S OPERATION IN HERNIA. (*Buffalo Medical and Surgical Journal.*)

The Doctor's conclusions: (1) Reconstruction is the best method. (2) No drainage should be employed. (3) Trusses should be prohibited afterward. (4) While a certain percentage will recur, the operation is justifiable between four and forty years of age, unless some physical disability contra-indicates the same. (5) Where omental or intestinal adhesions exist, and the use of a truss is unsatisfactory, the operation should always be attempted, as the danger from strangulation is greater than that from the employment of an anesthetic. (6) It is advisable to attempt a radical cure in all cases operated upon for strangulation, unless the gut be gangrenous, or the patient's vitality too low. (7) Where undescended testes exist, it will usually be found to be complicated by hernia, and at the time the organ is anchored to the scrotum the inguinal canal should be reconstructed.

Of something over thirty cases operated upon by me after the method of Bassini, I have had three recurrences. In each suppuration occurred, and the hernia made its appearance during the first six months.

MILLER, D. J. M.: A SHAWL-PIN, SWALLOWED BY AN INFANT, RECOVERED IN THE DEJECTIONS ON THE THIRD DAY. (*Archives of Pediatrics,* January, 1894.)

A babe, twelve months old, swallowed a pin two and five eighths inches long with a head one and one half inches wide, and it was recovered in the dejections on the third day. The child was seen by the writer fifteen minutes after the accident, but nothing was done.

Book Reviews.

Hernia, its Palliative and Radical Treatment, in Adults, Children, and Infants. By Thomas H. Manley, M. D., Visiting Surgeon to Harlem Hospital; Consulting Surgeon to Fordham Hospital; Member of the New York Academy of Medicine, American Medical Association, New York State and County Medical Associations, International Medical Congress, Pathological Society, National Associations of Railway Surgeons, etc. Philadelphia: Medical Press Company, Publishers.

This small and concise work of two hundred and twenty-seven pages has reached us and been read with a good deal of interest. Any thing that is written about hernia is eagerly sought for by the surgeon, if for no other purpose than in order to see whether or not the author offers any thing that is really new. Dr. Manley has succeeded in giving us quite a number of original ideas concerning the interesting subject of which he writes. It must be admitted, after reading many treatises on this subject, that one is in doubt whether there is much advance over the ideas and knowledge given by Sir Astley Cooper in his great work published decades ago. It is really to be doubted whether the so-called *radical cure* is not a misnomer, so futile have been the attempts in this line. Dr. Manley very properly ignores the ill-used term "rupture," and regards as hernia none other than that pathological state arising from the escape of some organ or normal structure from within the cavity of the abdomen. There are a few credits and operations that the author fails to give, yet all in all his book is a valuable one.

In his recapitulation and summary of operations one is surprised to hear the author say, "that since the general substitution of cocain analgesia for pulmonary anesthetics, unless our patients have been moribund, or the intestine is not gangrenous at time of operation, there have been no deaths, both with those on whom I have operated in hospital and outside practice." The surgical world will not admit that cocain analgesia is either preferable or safer than pulmonary anesthesia in operations of this or any other kind, and one is at a loss to understand how the death-

rate has been lessened by its employment in operations for hernia, even by so skillful an operator as the author.

By Dr. Manley's valuable suggestions many patients will be made the more comfortable after herniotomy, even if a radical cure is not attempted. It is to be regretted that the general make-up of the book, as far as the publishers are concerned, is so deficient.

The Physician's Leisure Library: Antiseptic Therapeutics. By Dr. E. L. Trouessort, Paris, France. Translated by E. P. Hurd, M. D. Detroit: Geo. S. Davis, Publisher.

The publisher of the Physician's Leisure Library has brought the profession under lasting obligations for a number of the most useful treatises published. One of the most interesting of all is the one with the above title. Any physician who desires to be up in the modern treatment of disease will suffer a great loss if he does not provide himself with these two handy little books. It is too much the custom that antisepsis is relegated to the surgeon, as theory and practice is concerned, forgetting its absolute necessity from the physician's standpoint. In this treatise antisepsis is the watchword, and whether the author is dealing with diseases of the respiratory apparatus, digestive apparatus, circulatory system, diseases of the skin, general infectious diseases, or what not, he deals exclusively with antiseptic treatment. Many prescriptions of rare value are included in the books, and are alone worth the price of them. This series, like all the others, is gotten up in excellent style by the publisher.

A Syllabus of Lectures on the Practice of Surgery, arranged in Conformity with the American Text-Book of Surgery. By N. Senn, M. D., Ph. D., LL. D., Chicago. Philadelphia: W. B. Saunders. 1894.

In noticing this excellent little work we can not do better than record the author's preface, which explains so fully the scope of the work:

"Every teacher of surgery must have felt the need of some short guide to aid him in the lecture-room in presenting the various subjects in a systematic, clear, succinct, and practical manner. The student of surgery, during his early college experience, is often bewildered by what he hears and reads, and keenly experiences that want of something which should enable him to separate the chaff from the wheat, and to memorize facts which

he is expected to retain and apply at the bedside during his future professional career. This little book has been written to meet these requirements. Its contents have been arranged in conformity with the American Text-book of Surgery, which in less than a year has achieved an unparalleled popularity, both among teachers and students. Wherever I have found the text defective I have added facts, names of authors, and operations, while in other places subjects not belonging within the limits of the practice of surgery have been excluded. Recitations are gradually displacing didactic lectures, and it is the author's hope that the Syllabus will prove of special value for this method of instruction, as well as in the preparation of the student for final examination."

This little work is attractively gotten up, is bound in a good pocket shape, is well indexed, and will meet the need for such a work admirably. We regret that space for more than a mere mention of this little work could not be given in our first issue.

Holden's Manual of the Dissection of the Human Body. By JOHN LANGTON, M. D., Surgeon to and Lecturer on Anatomy at St. Bartholomew Hospital, etc. Sixth edition. Revised by A. HEWSON, M. D., Demonstrator of Anatomy, Jefferson Medical College, etc. Three hundred and eleven illustrations. Philadelphia: P. Blakiston & Sons. 1894.

It is gratifying to note that a complete work on the dissection of the human body can be embodied in a book that is neither cumbersome nor unsightly. Works on anatomy are intended mainly for medical students, and one objection to many of them is that they are too large too handle. A student desires a work that he can carry easily, both into the lecture-room and to the dissection-table; all that he wishes to know is that it is a perfect anatomy, and such a work is the one before us. It is splendidly illustrated, printed on good paper, and bound in a most substantial way. Indeed, the binding at once commends the book, from the fact that it can not be soiled even by water or the fluids of the cadaver. The price is within reach of every doctor and medical student.

Proceedings of the Philadelphia County Medical Society. Vol. XIV. 1893.

The papers contained in this volume cover a wide field of medicine and surgery, and from the pen of men eminent in the

profession. Among the articles contributed upon subjects in which the readers of the QUARTERLY are interested are, "Gastro-jejunostomy for Malignant Obstruction of the Pylorus; Death from Asthenia on the Eighth Day," by John B. Roberts, A. M., M. D.; "A Case of Abscess of the Liver following Amebic Dysentery, with Remarks," by J. H. Musser, M. D., and DeForrest Willard, M. D., and "Report of a Case of Intestinal Obstruction due to Volvulus in the Duodeno-jejunal Region; Laparotomy; Reduction of the Volvulus; Recovery," by Ernest Laplace, M. D.

The Physician's Leisure Library. The Modern Climatic Treatment of Invalids with Pulmonary Consumption in Southern California. By P. C. REDMONDINO, M. D. Detroit: Geo. S. Davis, Publisher. 1893.

This little volume is attractively gotten up, presenting a colored frontispiece, "San Diego from Point Loma." Southern California seems indeed the Mecca where all consumptives should turn, as the author not too emphatically states, before severe pathological changes have occurred. It is the out-of-door life which is indicated, and in the region so ably described by Dr. Redmondino "the 'air-cure' can be carried out to its utmost degree of perfection, and it is here where lost physical ground can be most easily recovered."

The volume is supplemented by a copy of the records of observations of the United States Weather Bureau taken at San Diego, Los Angeles, and Coronado Beach. It is an excellent guide to those who are not posted on this question.

Books and Pamphlets Received.

A Midwinter Magazine. The methods of an actress are always interesting, and they are particularly so when an actress of such renown as Adelaide Ristori consents to tell them, as she does in the February Ladies' Home Journal. The "Aberdeen Waltzes," by Mrs. Frances J. Moore, to which was awarded the first prize in "The Journal's Musical Series" of last year for the best waltzes, are given in the full piano score, and are as melodious as they are "danceable." A most interesting article on "My Tabooed Playmate, Adelina Patti," is contributed by her one-time child-playmate, Katherine B. Foot. The concluding paper of Mrs. Frances Hodgson Burnett's series of "How Fauntleroy Really Occurred" will be read with mingled pleasure and regret. A more beautiful story of a story can not be imagined than the author of "Fauntleroy" has given here. The quaint "Pomona" continues her European travels, and writes in her characteristic manner with Frank Stockton's assistance. William Dean Howells continues his literary biography under the title of "My Literary Passions." The better appreciation by the husband of the wife's devotion is advocated by Edward Bok, and the Rev. T. De Witt Talmage is eloquent on the subject of aged women who are sometimes overlooked in the home. Sketches, with portraits, are given of the daughter of Sir Garnet Wolseley, General Grant's eldest granddaughter, the daughter of "Mrs. Alexander," and Dr. Talmage's eldest daughter. Mrs. Mallon's pages, "Black Costumes of To-Day," and "The Art of Dressing for Business," are charmingly illustrated. A particularly valuable article is that by Elisabeth Robinson Scovil on "Care in Infectious Diseases." Mrs. Lyman Abbott discusses many questions in "Just Among Ourselves." Altogether this midwinter number, with its daintily illustrated cover by Henry Sandham, and its attractive table of contents, is worth many times its price of ten cents, and no woman can afford to be without it. Published by The Curtis Publishing Company, of Philadelphia, for ten cents per number and one dollar per year.

The Outlook, published in New York, with the Rev. Dr. Lyman Abbott as its editor-in-chief, maintains its high place among thoughtful weekly journals. In "The Week" it reports and interprets current history; its signed articles are written by eminent and popular writers; its departments are many and carefully edited; it has something every week for every member of the household; it touches life on all sides; it is cheerful, progressive, readable.

From the time when Edgar Allan Poe launched the "Southern Literary Messenger," at Richmond, to the present day, failure has beset all attempts to properly represent the South in magazine literature. Now that The Southern Magazine is being read and commented on to such an extent in the East and North, the South at last has its "messenger," and the world will get true pictures of the storied South.

Edward Bok's successful article in the January "Cosmopolitan" on "The Young Man in Business" has been reprinted in a tasteful and handy booklet form at ten cents by the Curtis Publishing Company, of Philadelphia. To this reprint Mr. Bok has added some fourteen pages of editorial matter answering "Three Uncertain Young Men."

Hysterectomy by a New Method, which is Simple, Safe, bloodless, and Entirely Obviates the Necessity of either Clamp, Cautery, or Ligature; a Major Operation Converted into a Minor One by a Simple Process of Easy Dissection. By E. H. Pratt, M. D., LL. D., Chicago. Reprint from the Journal of Orificial Surgery.

The Direct Examination of the Female Bladder with Elevated Pelvis; the Catheterization of the Ureters under Direct Inspection with and without Elevation of the Pelvis. By Howard A. Kelly, M. D., Baltimore. Reprint from the American Journal of Obstetrics.

Cocaine Analgesia in the Treatment of Hemorrhoids, Ulcers, Fistulæ and Fissures in the Ano-Rectal Region. By Thomas H. Manley, M. D., New York. Reprint from Medical Brief.

The Present Status of our Knowledge of the Pathology of Pelvic Inflammation, with Special Reference to the Treatment of Pelvic Abscess. By Richard V. Maury, M. D., Memphis. Reprint from the American Journal of Obstetrics.

Notes on Cases of Homœo-Osteoplasty in the Shattering Disorganization of Compound Fracture of the Leg, Thigh, and Hand. By Thomas H. Manley, M. D., New York. Reprint from the New York Medical Journal.

The Relation or Coincidence of Diseases of Upper Air-passages to those of the Genito-urinary and Rectal organs. By J. G. Carpenter, M. D., Stanford, Ky. Read before the Mississippi Valley Medical Association.

The Pathology, Symptomatology, and Treatment of Hemorrhoids, Simple and Complicated. By Thomas H. Manley, M. D., New York. Reprint from St. Louis Medical Review.

Fibro-Myoma of the Uterus and Broad Ligament of Forty-five Years' Duration. By Thomas H. Manley, M. D., New York. Reprint from the American Gynecological Journal.

Relation Between Diseases of the Upper Air-passages and Diseases of the Eye. By J. G. Carpenter, M. D., Stanford, Ky. Reprinted from the University Medical Magazine.

The Cosmopolitan for February introduces a famous European author to its readers, Valdés, of Madrid, and the artist Marold, of Paris, well known as a French illustrator.

Conservative Surgery of To-day in Obstetrics, Abdominal, and Pelvic work. By J. G. Carpenter, M. D., Stanford, Ky. Reprinted from the American Practitioner and News.

The Successful Management of Inebriety without Secrecy in Therapeutics. By C. H. Hughes, M. D., St. Louis. Reprint from the Alienist and Neurologist.

Remarks on Fermentative Dyspepsia. By Austin Flint, M. D., LL. D. Reprint from the New York Medical Journal.

Interstitial Oxidation and Nerve Feeding; Gardner's Syrup of Hydriodic Acid as an Internal Antiseptic. Eleventh Edition. Compliments of R. W. Gardner.

Syrup of Hydriodic Acid and its Uses, by R. W. Wilcox, M. D., LL. D., New York, and A Reply Thereto, by R. W. Gardner, New York.

Philadelphia, the Medical and Surgical Center of America. A letter to Medical and Surgical Reporter. By Dr. J. G. Carpenter, Stanford, Ky.

Trional; its Physiological Action, Therapeutic Uses, Doses, and Manner of Administration. Published by W. H. Schieffelin & Co., New York.

The Appearance and Condition of the Eye in Cholera. By L. Webster Fox, M. D., Philadelphia. Reprint from The Medical Bulletin.

Surgical Treatment of Tumors of the Neck. By Thomas H. Manley, M. D., New York. Reprint from the Medical Brief.

Trachoma. By Jules Mütermilch, M. D. Translated for the Ophthalmic Record by L. Webster Fox, M. D., Philadelphia.

Surgical Therapy of Rectal Cancer. By Thomas H. Manley, M. D., New York. Reprint from "Merck's Bulletin."

Epiphora or Watery Eye. By Prof. L. Webster Fox, Philadelphia. Reprint from the Times and Register.

Gold in Therapy. By E. A. Wood, M. D., Pittsburgh, Pa. From New York Medical Journal.

Renal Derangements. Lambert Pharmacal Co. St. Louis.

Notes and Queries.

We regret that the notice clipped from the *American Practitioner and News* of the issue of January 27th, read that the Quarterly was devoted to *diseases of the stomach and intestines*, and not as correctly written in the columns "What our Friends Say." We feel that this mistake was inadvertently made, and it is unlike the esteemed editors to so write, and are glad to reproduce under "What our Friends Say" the correction of the first notice.

Dissolution of Partnership.—The firm of Hummel & Parmele is dissolved, and in future Dr. A. L. Hummel will conduct the business of advertising agent at 257 N. Fourth Street, Philadelphia.

Errata.—In the article Sphincteropoesis, by Dr. Bernays, page 67, "strictures" should read *structures*, and "regulation," *regeneration*.

NOTICE TO CONTRIBUTORS.

Articles and letters for publication, books and articles for review, and communications to the editors, advertisements, or subscriptions, should be addressed to Editors of Mathews' Medical Quarterly, Box 434, Louisville, Ky.

All necessary illustrations will be furnished free of expense to authors where they send black and white drawings—or negatives—with their MSS.

All articles for publication in the Quarterly will be considered only with the distinct understanding that they are contributed to it exclusively.

Alterations in proof-sheets are charged at the rate of 60 cents per hour, which is the printer's rate to the journal.

Reprints may be had at printer's rate if request is made upon proof when it is returned.

All manuscript must be received by the first of the month preceding its publication.

Remittances may be made by check, money order, draft, or registered letter.

The Editors are not responsible for the views of contributors.

MATHEWS'
MEDICAL QUARTERLY.

"ALIS VOLAT PROPRIIS."

Vol. I. JULY, 1894. No. 3.

Original Contributions.

TRANSVERSE COLOTOMY; FAILURE TO MAKE A SPUR, AND PROLAPSE OF GUT; RESECTION OF ARTIFICIAL ANUS; RECOVERY.

BY HERBERT ALLINGHAM, F. R. C. S.,
Surgeon to the Great Northern Hospital; Assistant Surgeon to St. Mark's Hospital, London.
LONDON, ENG.

[Written for MATHEWS' MEDICAL QUARTERLY.]

CASE 1. M. A. D., aged twenty-seven; came to St. Mark's Hospital, March, 1893. He gave the following history: Was born in Old Calabar, West Africa, and had lived the greater part of his life there. Had had two attacks of acute dysentery. The first fifteen years, the second ten years ago. Had never had syphilis. About ten years ago, after the second attack of dysentery, he began to have frequent desires to go to stool, and on trying to empty the contents of the rectum he frequently passed much blood and slime. Soon an abscess formed about the anus which resulted in a fistula, and this was operated upon. The above symptoms have existed ever since, becoming worse of late. The last two years he has been rapidly losing flesh and was getting into a hectic state. On admission he was found to be suffering from extensive ulceration, with stricture of the rectum, the upper limits of the ulceration and stricture extending far beyond the reach of the finger. The discharge from the bowel was very offensive and profuse.

On March 13th I proceeded to do left inguinal colotomy. The abdomen being opened in the usual way, on introducing my fingers into the belly cavity, I found the sigmoid flexure very much thickened and involved in the disease and moreover firmly bound down to the vertebral column in the middle linea, therefore it was impossible to bring it to the opening in the left inguinal region. The opening was therefore closed, and I proceeded to perform transverse colotomy by making an incision in the linea alba above the umbilicus. The transverse colon was easily found and was free from disease. This transverse colon was found to have a very long mesentery, and therefore would be liable to allow of great prolapse of the gut. It was accordingly deemed wise to return the gut and close the abdominal wound in order that the probabilities of prolapse and the question of the position of the opening might be explained to the patient. This being done, on April 10th an incision two and a half inches long was made in the linea alba (below the umbilicus this time), the transverse colon found; and, as a result of the incision made previously above the umbilicus, it was rather fixed by adhesions, so that only a small piece of it could be drawn outside the wound, and so a not very satisfactory spur could be formed.

On April 15th the gut was incised, and the next day the bowels acted freely from the opening. On May 3d he left the hospital. On June 3d he returned to the hospital, complaining that the orifice had contracted and that some of the feces passed by the orifice into the distal part of the gut and thus from the rectum. This condition irritated the ulceration, and he complained that he was in no way relieved of the rectal discomfort. I enlarged the orifice considerably, hoping that by so doing all the feces might pass by it. This result, however, I was not very sanguine of, as it appeared that there was no spur, and so only a fecal fistula had been made instead of an artificial anus. On August 5th he returned to the hospital with a large prolapse of gut from the artificial opening. This, he stated, had occurred during a fit of coughing. It was reduced, but constantly recurred, and, moreover, as feces still continued to pass by the orifice and so to the rectum, I determined to resect the artificial anus and remove the prolapsed gut, by so doing to rid the patient of both troubles. On October 30th, under chloroform, a sponge being put in the

opening, the skin, muscles, and peritoneum around the circumference of the colotomy opening were divided, and with the fingers adhesions connecting the transverse colon to the parietal peritoneum around the orifice were freed. The peritoneal cavity so opened, the transverse colon with the colotomy opening was then pulled out of the abdomen, and the gut commanded above and below by pieces of india-rubber tubing passed through the mesentery. About five inches of the transverse colon were then cut away, including the artificial opening.

The vessels in the mesentery were secured, and the distal end of the gut sewn up by one row of sutures uniting the mucous membrane, and a second of Lembert's sutures uniting the serous edges. The distal end was then dropped back into the abdomen. The proximal end was then pulled well through the opening in the abdominal wall and held there by about six silk sutures, fixing it to the skin. The orifice in the gut being closed by a medium sized pair of clip forceps, thus preventing any escape of feces or flatus for at least twelve hours, by which time lymph would be thrown out, and so no chance of the peritoneal cavity becoming soiled.

The patient passed a good night. The next day, October 31st, the abdomen being a little distended, the pressure forceps were removed and flatus escaped. November 4th, bowels acted for the first time after a purge.

During the after-treatment of the case there are no important points to record. The recovery was most satisfactory in every way, and he left the hospital on November 18th.

I am much indebted to Mr. Ryall, the house surgeon, not only for his careful notes, but for the care and interest he took in the case.

CASE 2. *Cancer of Rectum; Inguinal Colotomy; Excision of Rectum; Resection of Inguinal Opening; Recovery.*

Family history. Father living; quite healthy; mother died of consumption, aged forty-eight; one brother living; quite strong; one sister died from consumption; one brother died in infancy.

History of patient. He is forty-four years of age; has been employed as a butcher all his life; never had a day's illness since he was a baby; never been an excessive drinker; no history of syphilis.

History of present illness. Was quite well ten months ago; soon afterward first noticed a frequent desire to defecate immediately

on taking food. This symptom has continued and has become much more frequent up till present date, having to go to stool on an average eight times a day. Five months ago noticed, on passing a motion, a pricky sensation as feces passed down rectum. It is now much more severe, especially if motion is at all hard. He describes it as if a knife was sticking into him. Three weeks ago passed blood from the rectum for the first time. Always has, since onset of symptoms, a dull, straining pain on left side. This is at times very acute. Has lost flesh lately. Went to the London Hospital and had left inguinal colotomy performed.

On admission. In the left inguinal region is an opening from which some feces pass, but a great deal passes by the rectum, causing great pain. In fact, he saw he was in *no way* relieved of his rectal irritation, this being caused by the *absence of a spur at the inguinal opening,* and so feces passing by rectum. In the rectum a malignant, ulcerated growth was found springing from the anterior left lateral and posterior wall of rectum. Its lower limit is three fourths of an inch from anus. The fingers could reach above its upper limit all around the growth. It is movable over underlying strictures. The right lateral wall was free from disease.

On November 13th I excised the rectum, removing about five inches of its entire circumference. The patient did very well, and so on.

January 8th: I operated to prevent feces passing into the rectum beyond the inguinal opening. Patient under the influence of ether. I divided the skin, muscles, and peritoneum around the whole circumference of colotomy wound. I then pulled the gut through the opening thus made, and resected three and a half inches of it. Hemorrhage was controlled by encircling the gut with rubber tubing. The distal end was closed by a series of two sutures, the first row uniting the mucous coat, the other the peritoneal to peritoneal. The proximal end was united to skin wound by four silk sutures at its upper part. Its lower limit was closed. A pressure forceps was then placed on free margin of proximal end of gut. Dressings applied.

January 9th: Was sick after operation; slept four hours during the night; states that he feels much easier this morning; temperature 98.8°; dressings removed; no distension; the lower part of wound painted over with collodion.

January 10th: Patient passed a very good night; complains of pain all over the abdomen; dressings removed; pressure forceps on gut taken off; a quantity of flatus escaped, giving him ease; temperature 98.8°; hiccough present.

January 12th: Slept well during the night; no pain or sickness; dressings changed; bowels have not yet acted.

January 14th: Sutures connecting the lower part of wound together removed; bowels have acted slightly to-day for the first time since operation.

January 15th: Bowels have acted freely.

January 20th: Hardened feces present in rectum removed.

January 21st: Left the hospital cured.

THE OPERATIVE TREATMENT OF INTERNAL HEMORRHOIDS AS PRACTICED BY AMERICAN SURGEONS.

BY CLAUDE A. DUNDORE, M. D.,

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PHILADELPHIA, PA.

[Written for MATHEWS' MEDICAL QUARTERLY.]

The surgical measures devised for the treatment of internal hemorrhoids have been numerous and varied, but it is the purpose of the author to merely consider those methods which are in use at the present day in this country. They may be classed for convenience as follows: (1) Dilatation; (2) injection of carbolic acid; (3) torsion; (4) application of acids; (5) excision; (6) clamp and cautery; (7) ligature.

I. DILATATION.

The patient first being anesthetized, the thumbs of the operator should be well greased, inserted into the rectum, and the sphincter gently and gradually stretched in all directions, until the muscle is entirely relaxed. By using a speculum such as Pratt's, for this purpose, as is sometimes done, it is true it is possible to exert more force with much less effort; but the operator not being able to use his sense of feeling to judge when all con-

traction is overcome, may use an extreme degree of force, thus severing more or less muscular fibers, which should always be avoided.

Vernuil advocated this method for small hemorrhoids and ones of recent origin, and claimed it gave great relief, which was in many cases permanent. Allingham says,[1] "it will give wonderful relief in selected cases," but in this country it has met with but slight favor among the regular profession.

It should be used, however, as a preliminary step in all other operations for hemorrhoids, in order to paralyze the muscle and thus give rest to the parts during the reparatory process; it is for this reason I have described it here.

II. INJECTION OF CARBOLIC ACID.

This consists in injecting about five drops of a solution of carbolic acid (usually in glycerine, and varying in strength from 10 to 50 per cent.) into each pile, which immediately swells, becomes exceedingly dark in color, and should be returned to the rectum. The weaker solution sets up an inflammation, which as it ceases is followed by more or less shrinking of the pile; the stronger solution causing rapid and often extreme sloughing of the entire mass, leaving an ulcer which varies greatly in size. Some years ago this method had many advocates, but as time has elapsed they have dwindled in number, and even those who still uphold its efficiency are more careful in their statements, and acknowledge some of its dangers. It is uncertain and fraught with danger, for it is impossible to foretell or limit the amount of inflammatory action which will be set up; and recorded against it we have excessive sloughing followed by hemorrhage, extensive ulceration ending in stricture of the rectum, abscess, fistula, embolism, and pyemia.

III. TORSION.

This method, as generally described, is used very seldom if at all in the United States, and under this heading I merely give the method advocated by Thomas H. Manley, of New York[2]:

> In the morning, when every thing is in readiness, the patient should be given from two to four ounces of whisky, the quantity to be gauged according to previous habits, its effects, etc.

After having cleansed, shaved, and scrubbed the integuments over the ischio-rectal fossa we are prepared for the first step in the operation, which is effective *cocainization* hypodermatically applied. Local analgesia, when practicable, is much preferable to pulmonary anesthetics. Our patient is more manageable, and there is no spurting of the feces over the operative field during manipulation.

Cocainization complete, the next and most vital step is complete and thorough *anal dilatation.*

Without this being efficiently carried out all else is a failure. But, to be painless and safe, it must be gradual and steady, or we will rupture the muscle and leave our patient incontinent.

In chronic old cases wherein, owing to malnutrition and interstitial changes in the sphincter, it has parted with its elasticity, laceration is very easy if we do not exercise caution. Thorough anal dilatation accomplishes two purposes of great importance.

First, it opens widely the anal portal, and so paralyzes the levator ani that the lower fourth of the rectum—the part always implicated in hemorrhoids—prolapses through the open vent, when it can be most minutely inspected and radically treated. This, however, is of minor importance compared with the profound effects which dilatation produces on the rectal disease. It is not material whether the hemorrhoids belong to the inflamed, intensely itchy, or irritable type, this stretching exercises a most salutary influence on them.

The third step in simple hemorrhoids will be the separate treatment of each tumor by forcible pressure massage.

Before this is commenced the entire cluster should be wiped clean and dry and be then freely mopped with the cocaine solution.

Now each hemorrhoid is separately seized, close to its base, firmly between the tip of the thumb, index, and middle fingers: first, put on a moderate but full stretch, then twisted, and finally so completely crushed that it is reduced to a pulp, and none of the investing tunics remain except the mucous membrane and its under stratum of fibrous tissue. When this has been completed the entire mass is again pressed up inside the sphincter, a suppository of opium introduced, a pad and bandage applied, when the patient is returned to bed. An active but painless inflammation follows, and as a rule, within two or three weeks, resorption and atrophy have so reduced the vascular masses that nothing now remains but their shrunken, diminutive stems.

IV. APPLICATION OF ACIDS.

This is of utility only in piles of the capillary variety, characterized by bright red patches of granulations, which bleed on the slightest provocation. Chromic acid, carbolic acid, and acid nitrate of mercury are used, but nitric acid gives the most satisfactory results.

The sphincter having been stretched and the pile exposed to view, it is painted with a brush dipped in nitric acid, care being exercised that none of the acid comes in contact with the surrounding normal tissues. The pile and adjacent mucous membrane should be greased with vaseline, and returned to the bowel. Superficial sloughing takes place, and the contraction which follows obliterates the granulating surface in about ten days.

V. EXCISION.

I give here the method of Mr. Whitehead, of Manchester, England, simple excision being little used.

Mr. Whitehead upholds the theory that in all cases of hemorrhoids we have to deal with a pathological condition of the entire venous plexus encircling the lower portion of the rectum, of which the hemorrhoids are but components parts, and assumes that, such being the case, the only radical procedure is that which obliterates this entire pile-bearing zone, as follows: After thoroughly stretching the sphincter, an incision is made at the junction of the skin and mucous membrane around the circumference of the anus, and the mucous membrane dissected from the tissues beneath so it can be drawn outside. The lower portion of the projecting membrane, with the attached hemorrhoids, is then cut off transversely, and the margins of the mucous membrane and skin are brought in apposition by means of sutures.

VI. CLAMP AND CAUTERY.

This method, first advocated and used so largely by Mr. Henry Smith, is as follows: The clamp is applied to the base of the hemorrhoid longitudinally to the bowel, and the blades closed by means of the screw. The hemorrhoid is then cut off within about a quarter of an inch of the clamp, and the cut surface wiped perfectly dry and repeatedly touched with the hot iron until the surface is well cauterized. The clamp is then slightly loosened, and all bleeding points are again touched with the iron until all oozing is entirely checked, after which the stump is returned to the bowel.

VII. LIGATURE.

Mr. Allingham's method of ligature with incision is described briefly by himself as follows[3]:

"The pile is drawn down by a vulsellum, and is separated with scissors from the muscular and submucous tissues upon which it rests. The incision is made at the junction of the skin with the mucous membrane, and is carried up the bowel, so that the pile is left connected by vessels and mucous membrane only. A strong silk ligature is then tied as tightly as possible at the

neck of the pile, and great care is required in tying all the knots that are made, as many as three being desirable. The ligatured pile is then returned to the bowel. The pile is not to be transfixed with the ligature, that is quite unnecessary."

In this country it is customary with many surgeons to transfix the base of the hemorrhoid with a double ligature if it is very large, and also to cut off the hemorrhoid about a quarter of an inch from the ligature before returning the stump to the bowel.

The ligature, clamp and cautery, injection of carbolic acid, and Whitehead's operation, each have their advocates, and many and heated have been the discussions which have arisen as to the relative merits of these various methods; the adherents of each striving to prove that *their* favorite procedure was the least painful, safest, easiest of execution, and should be used in all cases. While it is undoubtedly true that the surgeons who limit themselves to one favorite operation become adepts in its performance, are more careful and better able to cope with the dangers incurred, and show excellent results by their statistics, still it is an open question whether it is not preferable as a matter of justice to the patient to apply the method of procedure which good judgment should suggest as the most suitable for each particular case.

The writer's object has been to collect the opinions of American surgeons in regard to the most satisfactory methods of treating internal hemorrhoids, as proved by results in their practice, quoting the following from miscellaneous literature on the subject, and from personal letters received in answer to inquiries addressed to many of the prominent surgeons in the United States.

While it would be utterly impossible to obtain the opinion of every surgeon, still it is probable that the following fully represent the general views on this subject, and will go far toward showing which surgical methods prove most available in the treatment of these cases.

Until very recent years this class of cases was almost ignored by the regular profession, especially so by the general practitioner, the very person who meets with most of these cases, and who should be able and willing to treat them rationally, as he would any other disease, instead of allowing them to fall into the hands of the charlatan to be fleeced and maltreated.

The palliative methods so largely used by some men, not only in the treatment of hemorrhoids, but all diseases of the rectum, are in a large percentage of cases *absolutely worthless*, and the sooner the men who attempt to treat these cases realize this, the far more successful will they be in their results.

LETTERS RECEIVED.

Dr. R. H. Plummer, San Francisco: "My usual operation in internal hemorrhoids is by ligature, for the reason that it is less likely to be followed by hemorrhage."

Dr. Levi Cooper Lane, San Francisco: "As a rule, I practice either the method of ligature and excision (Allingham) or that of Henry Smith, of London, viz., clamp and actual cautery. The plan by excision with immediate muco-cutaneous closure appears to be a rational procedure."

Dr. C. G. Kenyon, San Francisco: "I have used the ligature almost exclusive in my practice. I have never taken much to the 'new methods' of treating hemorrhoids, and particularly Whitehead's, which seems to be suited to surgeons of small practice, and I would like them to choose my enemies for patients. I have seen this method do badly in other hands."

Dr. Robert A. McLean, San Francisco: "It has been my custom to treat internal hemorrhoids by the ligature. For external hemorrhoids I prefer excision and approximation of the edges of resulting wound. The result of ligature in the internal form of the trouble has been so generally successful in my experience that I have not been tempted to try any other plan, and consequently know nothing personally of the results of Whitehead's operation."

Dr. Clayton Parkhill, Denver, Col.: "The operation for internal hemorrhoids which has given me most satisfaction is the 'clamp and cautery.' In fact, I have abandoned all others except an occasional Whitehead. The reason for my preference is that I have not had a failure in several years' work, and I have never had an infection. While it is the most certain in its results, it is at the same time the least painful to the patient and the easiest for the operator."

Dr. E. R. Lewis, Kansas City, Mo.: "In the treatment of internal hemorrhoids I have used the ligature, clamp and cautery, and the injection of carbolic acid one to three. In women I usually prefer the injection; where there is much redundancy I use the clamp and cautery, and less frequently the ligature in uncomplicated male patients."

Dr. Emory Lanphear, Kansas City, Mo.: "For a single large hemorrhoid, situated directly above the sphincter, I prefer the

application of the clamp and cautery after thoroughly paralyzing the sphincter by the Pratt speculum. The clamp is always applied parallel to the long axis of the bowel, never transversely, that is, never across the gut, so that the scar contraction increases rather than diminishes the lumen of the bowel. Even if there are two large hemorrhoidal tumors I generally use the clamp and cautery. For hemorrhoids that are numerous, as is frequently the case, and especially for those situated tolerably high up, I generally employ a ligature, cutting the mucous membrane around the tumor, then transfixing, as I would a pedicle in ovariotomy, and tying. I then excise the tumor, leaving sufficient tissue to prevent slipping of the ligature. This I prefer to the old method of ligation and allowing sloughing of the pile.

"I make it a point to thoroughly paralyze the sphincter before such an operation and then pack the rectum very tightly with gauze, which is left in place for forty-eight hours. I believe that this tamponade is more important than the application of the ligature; in fact, I would scarcely hesitate to cut off a hemorrhoid without the ligature and pack the rectum to control the hemorrhage.

"I have made Whitehead's operation where the mucous membrane of the lower part of the rectum was greatly degenerated, and I have had very successful results, at the same time I am not doing as many of these operations as I thought I would when the operation was first described."

Dr. E. H. Gregory, St. Louis, Mo.: "For internal hemorrhoids I use the ligature for these reasons, a sense of security and satisfactory results. I have no experience with or observation of Whitehead's operation."

Dr. A. V. L. Brokaw, St. Louis, Mo.: "From a fairly large personal experience both in hospital and private practice I feel that the operation by ligature is the one in the vast majority of cases of hemorrhoids. This, of course, in cases of internal hemorrhoids being preceded by slow and careful dilatation of the sphincters. Whitehead's operation for several years has been quite a favorite one with me. I have operated more frequently using this method than any other. My results have been, with two exceptions, all that could be desired, as far as I am able to learn from the patients. In one instance, probably from an oversight on my part, there was a return of the trouble necessitating a second operation. In the second case, four months after the operation, the contraction of the anus was so marked that it was necessary to dilate with bougies for some time. The final outcome of this case, however, was all that could be desired."

Dr. A. C. Bernays, St. Louis, Mo.: "I operate for internal hemorrhoids, (1) by the clamp and cautery, (2) by the aseptic ligature.

"I *always* dilate the sphincter before operating. All operations through narrow specula are necessarily imperfect and most likely to be followed by unsatisfactory results.

"*It is necessary* to *anesthetize the patients* in order *to do the highest class of rectal surgery;* and it goes without saying, of course, that the patients must be properly prepared and that all precautions toward securing safety from infection must be taken.

"The routine practice should be saline purge on third or fourth day after operation; no opium.

"The removal of the so-called pile zone (Whitehead's operation) has not been necessary in my experience, though I think it may be a very beneficial procedure in some cases. I refer to a class of cases where there is a pathological condition which is perhaps identical with telangiectasia, or with nevus vascularis, or pulsating cirsoid aneurism, or angioma of the mucosa of the rectum. In a case of this kind extirpation after Whitehead's method would be indicated. I have never seen a death in my practice after an operation for piles, and I know of only three cases where death was caused by sepsis after operations on hemorrhoids."

Dr. G. W. Cale, St. Louis, Mo.: "A so-called palliative method, which it really is in the sense of delay, but which I consider the most unsatisfactory, most unscientific, most dangerous in its immediate as well as in its after-effects, is the treatment by injection of carbolic acid, chloride of zinc, and other like substances. This method may be followed by embolus, fistula, extensive sloughing, stricture, etc., and still the patient remain uncured.

"Of the radical operations, that by the ligature is safe, effective, quickly done, but is usually followed by much discomfort and pain to the patient; the period of convalescence is also rather prolonged.

"Whitehead's operation is severe, extensive, and may be followed by hemorrhage, eversion of the rectal mucous membrane, or the stump of mucous membrane may fail to unite, and we then have a granulating wound from one to two inches in width which is apt to be followed by stricture of the rectum.

"The method of crushing with the fingers under local anesthesia, as practiced by Manley, of New York, I have not tried, and therefore can express no positive opinion, but theoretically I am not favorably impressed with it.

"The operation with the clamp and cautery is safe, can be quickly done, and I believe yields the best ultimate results; the patient suffers less discomfort and pain and is usually practically well in a few days.

"Of course each method of operation has its advocates, and each (except that by injection) is productive of good results; on

the other hand, each has been followed by fatalities. It is very necessary that the sphincter should be thoroughly dilated before either of the operations is commenced.

"The simplest operation in surgery may be made a failure by a bungling operator. To sum up, I believe the greatest good can be done to the greatest number by the clamp and cautery method in the hands of able and conscientious surgeons, and I myself give the preference to that method."

Dr. Nicholas Senn, Chicago, Ill.: "In the treatment of hemorrhoids I resort to the clamp and cautery in cases in which distinct and isolated swellings exist, and Whitehead's operation in diffuse circular varicosities."

Dr. R. N. Isham, Chicago, Ill.: "I am governed in my choice of operations by those which can be adapted to the peculiarities of each individual case or which will best insure me against the dangers of sepsis and hemorrhage My preference is first for the ligature, in the application of which I do not allow myself to transfix the tumor with a double ligature, or of making a wound to bury the ligature, thus avoiding a way for the introduction of an element of sepsis, or occasionally the accident in tying with a double ligature of transfixing a vein, rendering it patulous. When the ligature is not applicable by reason of a sessile tumor, I prefer the clamp and cautery. These two methods of operation, in my experience and judgment, best cover all forms of internal hemorrhoids, and I believe would lessen the rate of mortality, which is about five per cent."

Dr. John B. Hamilton, Chicago, Ill.: "I use the ligature by transfixion and the clamp and cautery in preference to other methods. The last named method I much prefer to any other where there are a number of hemorrhoidal tumors. In those rarer cases where there is only a single tumor the ligature is sufficient. I do not like Whitehead's operation. The cautery has the advantage of forming an eschar, which, being temporarily germ proof, prevents infection during the early days of healing."

Dr. Edmund Andrews, Chicago, Ill.: "I have used quite a variety of operations for hemorrhoids, and do not confine myself to any one as my favorite. My ideas and reasons are about as follows:

"1. The old French operation with the ecraseur is liable in a few cases to hemorrhage of a dangerous character.

"2. The clamp and cautery is subject to the same danger, but in a much less degree.

"3. The ligature (Allingham's method) is the safest of all plans against hemorrhage, which is a very important point where the patient lives at a distance and can not be under close watch in a hospital. This fact naturally and properly has great weight

with country and village practitioners. The chief objection is that it is on the average more painful than the clamp and cautery or Whitehead's method. I think it also, probably more frequently, causes retention of urine.

"4. Coagulant hypodermic injections are on the average the least painful operations, and they do not confine the patient to the house. The objections are that the completion of the cure is slow; relapses at a later period are frequent; fatal embolisms and dangerous abscesses occasionally occur, and severe hemorrhage is more frequent than after any other method. Pretty large ulcers sometimes follow the sloughing of the pile; nevertheless, a careful surgeon will find use for the plan in a few cases.

"5. Vernuil's method (of Paris), by a simple forced dilatation of the anus, will cure many cases, and is mild and very safe. It will not cure all cases, and hence can not be used where a patient comes from a distance, and for that and other reasons must have a sure result.

"6. Whitehead's operation, like the ligature and clamp and cautery, effects a sure cure with less pain than the ligature. Relapse is impossible. For these reasons it is desirable in some cases where the whole anus is occupied with piles.

"The objections are that sometimes union by first intention fails, the mucous membrane retracts and leaves a circular ulcer; this necessitates another operation, otherwise the ulcer produces a stricture. Another objection is that the mucous membrane, drawn down from above, is of a different and more delicate type from that naturally lining the anus, and not well adapted to stand the rough friction at the anal verge, so that the patient sometimes has a chronic discomfort from this cause. I reserve Whitehead's operation for a few cases only."

Dr. Joseph B. Bacon, Chicago, Ill.: "My choice of methods is either the ligature or the clamp and cautery, yet in selected cases I use carbolic acid as an injection, also galvanism. I use the ligature in those cases where the sphincters are strong and the hemorrhoids are extensive and fed by very large blood-vessels. I feel, when I have left the case with ligatures holding the large arteries, that the patient is safe from hemorrhage.

"The ligature leaves a smaller cicatrix than the cautery, and with hypertrophied sphincters a cicatrix may act as a center of irritation and keep up the hypertrophy of these muscles with resulting constipation. I also use the ligature when the patient has heart, kidney, or lung disease that is sufficiently advanced as to make an anesthetic dangerous if prolonged. I do this because I can complete the operation, after the sphincters have been divulsed, without an anesthetic. I use the clamp and cautery in those cases where the sphincters are weak and the mucous membrane protrudes extensively with the hemorrhoids.

"My reason for using this method is that the linear cicatrix resulting from the cauterization being greater than that formed by the ligature will contract more and thus retain the mucous membrane above the grip of the sphincters, at the same time will increase the power of the abnormally weakened muscles.

"My personal experience with Whitehead's operation has been very limited. Up to the time when I stopped using it I met with no unfavorable results in my work, and my only reason for not continuing to use it was that I realized that the dangers connected with the operation were so great that it would only be a matter of a short time when some of my cases would result disastrously.

"No surgeon can be sure of primary union of a wound about the anus. Failure of primary union means the granulation of the surface followed by a circular cicatrix that may result in a stricture. I have been consulted many times during the past two years by patients suffering from stricture of the anus following the Whitehead operation.

"I have several cases under my care suffering from sphincter incontinence due to this method. The operators had cut away a part of the sphincters in their effort to dissect away the mucous membrane. I saw this accident happen while watching one of the most noted and skillful surgeons in this country do a Whitehead operation. He explained to me that in dilating the sphincters he had ruptured the fibers, and the torn muscle so closely resembled the connective tissue that he cut it away with the mucous membrane before recognizing it.

"I consider the Whitehead operation should only be done in exceptional cases, because the operation presents these dangers:

"1. May result in anal stricture.

"2. May result in incontinence.

"3. The time required for its performance and the loss of blood necessarily accompanying it make it a serious operation."

Dr. Daniel La Forte, Detroit, Mich.: "For over twenty years, since my advent in practice, I have employed only one method, that of the ligature (Allingham), tying in two by means of a double ligature. I have always effected a cure; never had any relapses, and never had any trouble after the operation. I have never performed Whitehead's operation, as I can not see the wisdom of subjecting a patient to so severe an operation."

Dr. C. B. Nancrede, Ann Arbor, Mich.: "If the pile is soft, consisting of little but vascular tissue, being little hypertrophied, injection with carbolic acid often arrests bleeding, and sometimes effects a genuine cure, viz., the pile mass shrinks away and the prolapse of the mucous membrane is relieved from inflammatory adhesions between mucosa and musculosa through the cellular coat.

"If anesthesia or confinement to bed is contra-indicated, injection under the above circumstances is my preference, but I rarely meet with such cases.

"Where the perivascular tissue is decidedly hypertrophied, removal is indicated by either ligature or clamp and cautery, the latter preferably, because a charred, *i. e.*, antiseptic surface is left, and when the slough separates, granulation tissue is present, an excellent barrier against absorption.

"Crushing I have never employed, for I can not see its superiority, and Whitehead's operation I have never performed, having yet to see the case where I think it is justified."

Dr. F. E. Bunts, Cleveland, O.: "I have had personal experience with but two methods, the ligature and clamp and cautery. I say without hesitation that in my experience the clamp and cautery treatment has been most satisfactory; indeed so much so that I have not felt inclined to make use of any other means. It has always proven safe, rapid of accomplishment, and, where the sphincter has been thoroughly dilated previous to the operation, practically free from pain. I do not recall any case complaining of stricture or other bad after-effect of operation. I have had no experience with Whitehead's operation. In view of the excellent results obtained by use of the cautery, I personally should not make use of it unless there was considerable prolapse of the mucous membrane."

Drs. Charles and W. D. Hamilton, Columbus, O.: "It is our habit to stretch the sphincter, under ether, and ligate internal hemorrhoids. Sometimes, when there is a varicose condition, we touch up the parts with nitric acid or the cautery. The ligature is simple, promptly curative, and is followed by little if any reaction."

Thomas C. Hoover, Columbus, O.: "I am not wedded to any one method of treatment, but prefer to use any method which will seem the most promising. In mild cases I have had satisfactory results by dilating the anus, after the bowels have been thoroughly evacuated, first by cathartics, and then by copious enemata; putting the patient to bed for two weeks after such proceeding has entirely relieved some cases of small tumors.

"In those cases where the tumors are large, I use the clamp and cautery or the ligature. My choice between the two is determined by the location of the tumor and the size of its base. If the tumor is very broad, I prefer the ligature. In all other cases, if the tumor can be grasped with the clamp parallel to the long axis of the bowel, I prefer to use the clamp and cautery. My observation has been, that in all cicatrices of loose structures there is a maximum degree of contraction, and in the operations

for hemorrhoids I always endeavor to locate the cicatrix in such manner as will least likely affect the diameter of the rectum. Cicatrices after burns are always peculiarly liable to viciously contract, and a seared pedicle of a hemorrhoid is a burn. For the same reason I prefer the ligature in the cases of very large tumors.

"In two cases I have seen stricture of the rectum consequent upon removal of hemorrhoids with clamp and cautery. In both instances I was sure from the character of the contracture that the clamp had been applied transversely. Obviously there is greater possibility for contraction in the long axis of a cicatrix than in its short.

"In my own cases I have not had any unpleasant results so far; I have always been careful to include just as little tissue as may be necessary for the proper performance of the operation."

Dr. D. W. Cheever, Boston, Mass.: "I use only Allingham's operation for internal piles, dissection of the pile and the ligature; occasionally I apply nitric acid; I have rarely injected carbolic acid.

"I am satisfied with my results; I use a long course of after-dressing and careful nursing. I can recall the death of only one patient, and he did not have the patience to follow out my treatment."

Dr. Joseph M. Mathews, Louisville, Ky.: "In few words I would say that, arguing from every standpoint, the ligature is the easiest, safest, most aseptic, and most radical in its relief, and attended with the least danger. This conclusion is reached after several thousand operations by the ligature, and after having tried all other plans."

Dr. W. L. Rodman, Louisville, Ky.: "Nearly every Louisville surgeon prefers the ligature to any other method of treating internal hemorrhoids. I always use it myself, having settled on Simon's method as the best. I think well of Whitehead's operation in cases of piles accompanied with prolapse of the mucous membrane of the bowel. Ordinarily, however, it makes a prolonged and more or less difficult operation out of what by the ligature is a very simple one. The ligature is practically painless, convalescence short, and, so far as my experience goes, *absolutely certain.*

"I have never failed to relieve (as far as I know) any case operated upon, and have never seen a dangerous symptom after any of my operations."

Dr. D. W. Yandell, Louisville, Ky.: "When the hemorrhoids encircle the anus, I think the Whitehead method much the best. Otherwise, and in the most common form, I usually practice what is mistakenly called the 'Allingham' method; this method, as

you know, does not belong to Allingham, but really originated with Simon, and nearly invariably yields satisfactory results."

Dr. Manning Simons, Charleston, S. C.: "Of the operative plans usually recommended, (1) excision, (2) ligature, (3) crushing, (4) clamp and cautery, (5) application of caustics, (6) injection of carbolic acid, my positive preference is for the ligature, and I almost invariably employ this method. I use properly prepared silk ligatures, drawn tightly on the base of the hemorrhoid after the mucous membrane has been notched all round with scissors. I regard this notching as important, partly to provide against possible slipping of the ligature, but especially near the muco-cutaneous line to avoid the including of nerve filaments.

"I always have tetanus in mind as a possible danger in this operation, and believe that the cutting of such filaments may be a safeguard. In making this statement I am not unmindful of the modern doctrine of the causes of tetanus.

"When the mass is large I have used the elastic ligature with good results; by this means I have avoided transfixing the base of the mass more than is absolutely necessary, and have at the same time insured the more rapid separation of the ligature and the tissues beyond.

"I have no experience with crushing, and I have never employed it, because I do not think it gives the same safety from hemorrhage as the ligature, and it certainly, to my mind, offers no advantages over the latter.

"To the clamp and cautery I have the same objection that obtains against the above agent as a hemostatic in a wound of any kind, except as a matter of necessity to stop a general oozing not controllable by hot water. There is danger of hemorrhage on the separation of the eschar; this is an important matter in a cavity so vascular and at the same time so inaccessible as the rectum. Should hemorrhage occur under such circumstances, it would be most difficult to control after the tissues have been acted on by the actual cautery.

"Caustics are only applicable to those cases in which there are no distinct tumors, as those 'swollen, granular, ulcerating, bleeding surfaces' known as capillary or strawberry piles.

"The treatment by injection with carbolic acid I have employed in a few cases, but I do not like it theoretically or practically. My objection to injection in the treatment of piles applies to this employment of coagulating agents in any vascular tumors."

Dr. W. B. Rogers, Memphis, Tenn.: "I would briefly say that I prefer the ligature (the Allingham operation). Occasionally I use the carbolic-acid injection. I have never done the White-

head operation, nor have I tried Manley's method of crushing the piles with the fingers. My preference and practice is the Allingham operation."

Dr. J. McFadden Gaston, Atlanta, Ga., says, after palliative measures fail, as a last recourse he uses carbolic acid ʒj, glycerine ʒiij, and water q. s. ad. ʒiv, injecting one syringe full into each internal hemorrhoid.

Dr. Edmond Souchon, New Orleans, La.: "On timid and nervous patients I operate by injecting the pile with carbolic acid and glycerine according to ordinary rules; they prefer a long treatment without chloroform, without being put to bed, even with a possibility of return.

"On determined patients, who can not or will not stand a treatment of several weeks, or patients with very extensive piles, and patients who want a positive guarantee of no return, I give chloroform or ether and I ligate thoroughly after stretching the sphincter. The ligature is a simpler operation than the clamp and cautery, and for that reason I have now limited myself to it. I have had no return in any case I have ligated, no matter how bad."

Dr. James Kerr, Washington, D. C.: "My favorite method for dealing with hemorrhoids that require operation is the clamp and cautery; external and internal alike."

Dr. R. W. Johnson, Baltimore, Md.: "I have found the clamp and cautery most efficient and satisfactory in the cases mentioned, as there is less hemorrhage and the wound is aseptic, at first at least. I have not done Whitehead's operation."

Dr. Herman Mynter, Buffalo, N. Y.: "In cases of internal hemorrhoids I prefer the clamp and thermo-cautery, having previously dilated the anus. I prefer this method because, (1) It is devoid of all danger; (2) it is simple in its execution; (3) it is not followed by hemorrhage if the cautery is used properly; (4) it is almost painless in its after-effects; (5) it confines the patient to bed for about one week only. If the whole lower segment is one mass of piles I use Whitehead's operation, but I prefer the clamp and thermo-cautery wherever feasible. I have never seen any complication with this method."

Dr. J. B. Murdoch, Pittsburgh, Pa.: "I have no hesitation in saying that in the treatment of internal hemorrhoids there is no operation in my opinion as good as the ligature. My reasons for this preference are as follows: (1) It is an efficient remedy; (2) it is easy of execution, and requires no complicated instruments; (3) a ligature if properly applied is done once for all; the cautery may have to be reapplied if bleeding follows the removal of the clamp.

"The actual cautery and all sorts of crushers produce terror in the minds of patients, which may prevent their submitting

to the operation, and may retard the cure. When the hemorrhoids involve the whole circumference of the anus, Whitehead's method should be used."

Dr. J. D. Thomas, Pittsburgh, Pa.: "My favorite method of operating is by the ligature, because it is efficient and gives no trouble afterward. I have had no experience with Whitehead's operation. When there is simply a 'varicose condition' dilatation is sufficient. I have seen unpleasant conditions after the injection of carbolic acid."

Dr. Frederick S. Dennis, New York: "I prefer Paquelin's cautery method for the reason there is no danger of pyemia from an infected thrombus, no danger of secondary hemorrhage, and usually no return of the trouble. If the actual cautery is used as suggested by Langenbeck, it is an excellent method; the whole success, however, depends upon attention to details. I have employed the method for many years, and upon many cases, and prefer it to all other plans. The mucous membrane should be excised around the pedicle, and then the hemorrhoids seared off with the iron."

Dr. Lewis A. Stimson, New York: "I use the ligature almost exclusively in the treatment of hemorrhoids; occasionally, but very rarely, the cautery. I have not employed Whitehead's method in some years."

Dr. W. W. Keen, Philadelphia: "For the treatment of internal hemorrhoids I ordinarily use the ligature or the cautery and clamp. Where they are very extensive and encircle the anus I like Whitehead's operation, and find that it answers admirably. Carbolic-acid injections I use no longer."

Dr. Lewis H. Adler, jr., Philadelphia: "In the operative treatment of internal hemorrhoids my preference is for the clamp and cautery.

"The advantages of this method are as follows: Quickness of execution; freedom from subsequent pain and retention of urine; a minimum risk of hemorrhage, and a less liability to septic infection, owing to the seared pedicle; to these may be added the speedy convalescence.

"Regarding Whitehead's operation, I have had no personal experience. I am not inclined to view this procedure with favor, owing to its several salient objections, to wit, the time required for its performance, the loss of blood which it entails, and the danger of primary union failing, in which case a circular granulating surface is left, which in healing is likely to cause atresia of the bowel.

"With reference to the status of the carbolic-acid-injection treatment I am unable to express any very definite opinion at the present time. In certain cases it has a field of usefulness,

but a limited experience with it leads me to discountenance its indiscriminate employment, for the reason that it is liable to be followed by proctitis, periproctitis, abscess, fistula, pyemia, or embolism."

Dr. James M. Barton, Philadelphia: "In hospitals and in the city, where the patient can be reached by me in case of accident, I use the clamp and cautery, because the patient is practically well on the fifth day. In the country, where the patient can not be reached in case of bleeding, I have been in the habit of using the ligature; but as I have had no accident with the cautery I think in future I shall use it altogether. I have not used carbolic acid for some years; its results were unsatisfactory."

Dr. Charles Kelsey, of New York, in an article entitled Four Years' Work in Diseases of the Rectum at the Post-Graduate Hospital Clinic, New York, says[4]:

"In the ninety operations for hemorrhoids the clamp and cautery have always been used, and there has been no case of hemorrhage, stricture, or other accident of any kind whatever, and no case of recurrence. The average length of time in bed has been forty-eight hours, and in hospital less than one week. You all know how common it is to see these patients up and walking around the wards two or three days after the operation, and how difficult it is to keep them here until the expiration of the first week in order to show them to the class. The house staff know how rarely any anodyne is given, and that the use of the catheter is almost unknown. These cases are operated upon moreover without any preparatory treatment of any kind. They come into the house an hour or two before the clinic, are etherized and operated upon, and for about two days are kept in bed. At the end of that time the bowels are moved by a laxative, and the patient begins to want to leave the house. Rarely does one remain more than a week. Some of them report as out-patients at the end of the second week; many are never seen again. This general history has been repeated nearly a hundred times before you in the last four years, and because these results are the ordinary ones, and can not be approached by any other method of operating, we always use the clamp and cautery, and shall continue to do so till something better is found to replace it.

"It is only fair to say, however, that the success of this method depends, like most other operations, a great deal upon the manner in which it is done. Although the operation is exceedingly simple, and can easily be completed in a case of extensive disease within a couple of minutes by a practiced operator, it is just as easy for an unskillful operator to cause great after-

pain, sloughing, and hemorrhage. It has come to my knowledge that in one part of the country the operation fell into great disrepute because of the after-pain and sloughing. Having, after considerable persuasion, myself operated upon one of the best of the unsuccessful operators, he was equally pleased and surprised at the entire absence of any bad symptoms. He could not understand the cause of the difference till he went with me to see yet another case, when, after a few seconds, he exclaimed, 'I see it all!' It seems that, instead of pulling the hemorrhoids outside of the anus before removing them, these gentlemen had been carrying the clamp and then the cautery within the bowel, and applying them to the tumors *in situ*."

In regard to the injection of carbolic acid he states[5]: "If the patient is very unwilling to submit to an operation, carbolic-acid injections may be made, injecting five or ten drops of a ten-per-cent. solution into the center of the tumor with a fine hypodermic syringe. But there will be many failures and some accidents, such as syncope, great pain, or sloughing, or abscess and fistula. Another palliative method of treatment—for carbolic acid is, after all, only a palliative—is the cauterization of the surface of the pile with nitric acid or the galvano-cautery. But the radical operations are the surest and safest."

He comments as follows[6] on Whitehead's method: "Primary union of a rectal wound is more or less doubtful in every operation. In neither the ligature nor the clamp operations is it striven for. Failure to obtain it in Whitehead's operation means severe stricture.

"That this result may follow his excision there is now abundant evidence, and this evidence constitutes a stronger objection to the method than any set forth in my original criticism of it.

"It has been thoroughly tried on this side of the ocean; as a surgical novelty it has given a certain number of satisfactory results and some bad ones; it is one more means at our command for curing hemorrhoids, but nearly all who have practiced it here have been content after a few trials and have returned to the older and time-honored methods as being simpler of execution and equally satisfactory in giving a radical cure."

Dr. John Wyeth, New York, says[7]: "There is little room for choice between the ligature and the clamp, and both of these are preferable to the carbolic-acid injection. Operation by ligature is deservedly more popular for the reason that it is not only simple, radical, and successful, but does not require any special or costly apparatus for its performance.

"The objections to the operation with carbolic acid are that it does not always succeed, it requires a long time—several weeks,

and at times months—in effecting a cure, periproctitis and ischiorectal abscess may ensue, and hepatic embolism with abscess is, however remote, a possibility. Since the operation by ligature is almost universally recognized by surgeons as the safer and more scientific procedure, it should be recommended. If the patient for any reason can not submit to it, the method of injection may be undertaken if, after a full explanation of the different methods, the operator is relieved of all responsibility."

Dr. James P. Tuttle, New York, says[8]: "The injection of carbolic acid, though generally condemned, is sometimes very efficient in simple hemorrhoids without ulceration and where the sphincter is relaxed. Where the tumors are prolapsed and large, the sphincters contracted, and where there are complications, such as fissure or ulcerations, the clamp and cautery operation of Smith is a most excellent method, and bids fair to supersede the old ligature operation.

"The ligature method seems to be disadvantageous, (1) because it can not be made aseptic; (2) because the pain is often severe and lasts for a week; (3) there is danger of secondary hemorrhage; (4) it is liable to leave ulceration and stricture; (5) it confines the patient to bed for a considerable time.

"The theory upon which the operation of excision is based—the removal of the whole pile-bearing area—is very plausible, but in this area lies the circulatory apparatus of the lower portion of the rectum. Among bad results I have seen are two cases of stricture, two of ulceration, one of prolapse with erosion, and two with retraction and maceration of the perineal cutaneous tissue."

Dr. Willy Meyer, New York, states[9]: "Every one of the operations has its own field, and it is largely a matter of individual preference; but I can not say that any one of the objections made to the ligature holds good. I have never seen any of the disagreeable results to which the author alluded. If we are careful to see that the patient remains in bed from about the tenth till the twelfth day there will be no danger from bleeding, and they will be ready to go about their business after the twelfth day. Whitehead's operation is no doubt the ideal operation, but should only be performed where there is good and sufficient assistance; hence in private practice I think the ligature and clamp are preferable."

Dr. Thomas H. Manley, New York, says[9]: "I entirely agree with the author that most cases of hemorrhoids can be treated by non-operative methods. There is no operation which will always permanently cure hemorrhoids, hence a safer method which will make the patient comfortable should be preferred to the more elaborate and more dangerous operations. Most of the opera-

tions on the anus can be conveniently done under cocaine anesthesia. In simple uncomplicated varicose hemorrhoids I have been using lately a method I saw in Paris. Under cocaine anesthesia the external sphincter is thoroughly dilated, and then the hemorrhoids are brought down and crushed separately with the fingers, and then twisted, when they atrophy, disappear, and give no further trouble."

Dr. Joseph D. Bryant, New York, says[9]: "If the technique of each operation is carefully followed it is found that provision is made against the removal of much tissue transversely. I have used the ligature the most extensively, and wherever I fear too much contraction I am careful to leave islands of mucous surface, and as a result of this precaution there has never been any undue contraction in my cases. I use silk when it becomes necessary to grasp very much tissue. I always separate the cutaneous border from the hemorrhoidal growth before transfixion. The statistics of these various operations show that it is hardly necessary to dwell much upon their dangers, provided due antisepsis is observed."

Dr. John B. Deaver, Philadelphia, says[10]: "I now rarely use any other method than the clamp and cautery; the advantages of this over all other procedures is its universal application."

Dr. John B. Roberts, Philadelphia[10]: "I have never used the ligature for internal hemorrhoids, and scarcely expect to do so. It is a painful, disagreeable, unsurgical procedure, at least it seems so to me. I believe the clamp and cautery is a more agreeable, rapid, satisfactory, and comfortable operation for the patient."

Dr. Richard H. Harte, Philadelphia[10]: "Dr. Roberts says the clamp and cautery is not a painful operation. I think, however, the operation is open to some objections. One is more liable to have hemorrhage than after the use of the ligature. As to pain, on several occasions I have on one side used the ligature and on the other the clamp and cautery, and, as far as I have been able to judge, there has been more pain on the side where the clamp was used than on that where the ligature was employed."

Dr. Ernest LaPlace, Philadelphia[10]: "I always use the clamp and cautery operation."

Dr. Thomas S. K. Morton, Philadelphia[10]: "For myself I believe I would suffer almost any thing rather than have half a dozen hemorrhoids tied by the old method. The clamp and cautery *is*, in contrast to the ligature, an agreeable operation."

Dr. John H. Brinton, Philadelphia, says[11]: "I prefer ligation of internal hemorrhoids; my opinion is decided in my preference for this method."

Dr. Thomas G. Morton, Philadelphia, says[11]: "My universal practice is the ligature for internal and the ligature and excision for the external variety."

Dr. John Ashhurst, jr., Philadelphia, says[12]: "On the whole I think that the ligature is the safest and altogether the best method of treating piles."

On the subject of carbolic acid-injections he states: "In certain cases this will give relief. I have, however, known of a number of cases treated by injection where, while the hemorrhage was stopped, the hemorrhoidal tumor remained, and was so annoying that the patient desired an operation for its removal. Carbolic-acid injections are not as popular as they were some five or ten years ago."

From the above it is very evident that the consensus of opinion is still strongly in favor of the ligature; the prevailing reason seems to be that there is a greater degree of security from hemorrhage after its use than by any other method. The method by clamp and cautery, when *properly applied*, gives results in every way equal to those produced by the ligature, but in the hands of inexperienced operators it is more likely to be followed by hemorrhage and stricture of the rectum. The injection of carbolic acid is not a radical method, and it is very uncertain and dangerous. Those who formerly used it most extensively now very seldom resort to it, if at all. Its only field seems to be as a palliative in very mild cases or when radical treatment is positively refused or contra-indicated, and at such times the only safety lies in the use of weak solutions.

The use of Whitehead's method in cases of ordinary hemorrhoids is unjustifiable. There is positively no excuse for using this method, which subjects the patient to so severe an operation and which may be followed by so many distressing after-effects, when the ligature or clamp and cautery produce excellent results with very little danger. For those cases in which the entire circumference of the anus is involved its use may be necessary, but that these cases are very seldom seen is abundantly proved by men of the widest experience.

The method of digital torsion and compression, as used by Dr. Thomas H. Manley, has not been tested to any extent. It may prove useful in occasional cases when radical measures are either

refused or contra-indicated. Very few surgeons would care to use this method in severe cases and expect a radical cure.

In cases of the capillary variety nothing proves as beneficial as the application of nitric acid; it is almost painless and always efficient.

That dilatation of the sphincter will *cure* any case, however mild it may be, is very doubtful. It is undoubtedly a palliative in very mild cases, but like other methods of this kind gives very little satisfaction.

As the above letters and quotations represent the ideas of many of the leading surgeons of this country on the subject in hand and very plainly show which methods are safest and most efficient, it is deemed unnecessary to present more than the following brief conclusions:

1. The ligature is the safest method of operating for internal hemorrhoids, as there is less likelihood of its use being followed by hemorrhage, strictures, or ulcers.

2. The clamp and cautery causes less pain, shorter convalescence, and is less likely to be followed by retention of urine than when the ligature is used; but hemorrhage and stricture of the rectum may very often follow its improper application.

3. The practice of Whitehead's method should be limited to those cases in which the entire circumference of the anus is involved. In ordinary cases of one or more hemorrhoids *it should never be used*, as it is liable to be followed by severe after-effects, and at best could produce no more radical result than the clamp and cautery or ligature.

4. Simple dilatation of the sphincter, injection of carbolic acid, and Manley's method are simply palliatives, and their use is very limited.

5. There is no single operation which is available in all cases. Experience alone should suggest the most efficient method of treating each individual case.

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FIFTY CASES OF RECTAL SURGERY.

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[Written for Mathews' Medical Quarterly.]

Although rectal disease offers one of the most fruitful and available branches of surgery, it seems to have been the most sadly neglected. In consequence thereof statistics avail but little, in that but few cases have been tabulated as compared with other kinds of surgery.

Although cancer, stricture, fistulæ, hemorrhoids, ulcers, fissures, etc., have been recognized from time immemorial as the more common conditions existing within and about the rectum, the treatment, until within a comparatively recent date, was of but little consequence. The progress in their management, however, has been as varied within recent years as in the management of any other class of surgical cases. Lives are not only saved, but prolonged, comfort given and pain relieved in these conditions so often found about the anus.

It is my personal experience in the treatment and good results obtained in these various conditions which prompts me to offer the following observations upon fifty subjects on whom I have operated for the various conditions herein mentioned:

SUMMARY.

Number	Age	Sex	Color	Chloroform	Cocaine	Duration	Operation.	Cancer	Syphilis	Tuberculosis	Stricture	Hemorrhoids	Fistulæ	Fissures	Ulcers	Extensive	Loss of Time	Sphincter	Remarks.
1	25	M.	W.	1	.....	6 yrs...	Cautery, ligature and cut.	.....	Yes	.....	.....	2	1	1	Yes	Yes	2 wks..	Good	Good recovery. Cured.
2	28	M.	W.	1	.....	4 yrs...	Ligature.....	.....	Yes	.....	.....	3	.....	.....	.....	.....	4 dys...	Good	Cured.
3	37	M.	W.	1	.....	8 yrs...	Clamp & cautery, division	.....	.....	Yes	.....	4	.....	1	Yes	.....	3 dys...	Good	Cured.
4	31	M.	W.	1	.....	6 yrs...	Clamp and cautery.....	.....	Yes	.....	.....	6	.....	.....	Yes	Yes	2 dys...	Good	Cured.
5	26	M.	W.	1	.....	Life ...	Clamp and cautery.....	.....	.....	Yes	.....	7	.....	5	.....	Yes	3 wks..	Good	Very slight trouble remaining.
6	29	M.	W.	1	.....	1½ yrs	Clamp & cautery, division	.....	.....	Yes	.....	4	.....	Yes	Yes	Yes	1 wk...	Good	Cured.
7	31	F.	W.	1	.....	4 yrs...	Ligature.....	.....	Yes	.....	.....	1	.....	.....	.....	.....	None..	Good	Cured.
8	31	M.	W.	1	.....	2 yrs...	Ligature.....	.....	Yes	.....	.....	2	.....	.....	.....	.....	None..	Good	Cured.
9	35	M.	W.	1	.....	3 yrs...	Ligature.....	.....	.....	Yes	.....	1	.....	.....	.....	.....	None..	Good	Cured.
10	29	F.	W.	1	.....	2½ yrs	Division, knife.....	.....	.....	.....	.....	.....	1	.....	.....	.....	1 dy....	Good	Cured.
11	35	M.	W.	1	.....	9 mos..	Curette and cautery.....	†	.....	.....	.....	.....	.....	.....	.....	.....	.....	Bad..	Died eighteen weeks later.
12	45	F.	W.	1	.....	2 wks..	Curett'd,extensive slough	.....	Yes	.....	.....	.....	.....	.....	.....	Yes	.....	Poor.	Died three days later. Slough about sphincter.
13	34	M.	W.	1	.....	2 yrs...	Division, knife.....	.....	Yes	.....	.....	.....	1	.....	.....	Yes	2 dys...	Good	Cured.
14	48	M.	W.	1	.....	3 yrs...	Division, clamp & cautery	.....	Yes	.....	.....	1	1	.....	Yes	.....	1 dy....	Good	Cured.
15	65	F.	W.	1	.....	18 mos..	Division with finger.....	.....	Yes	.....	.....	1	1	.....	.....	Yes	1 wk...	Good	Cured.
16	28	M.	W.	1	.....	3 yrs...	Division with finger	.....	Yes	.....	1	.....	.....	.....	.....	Yes	2 dys...	Good	Improved.
17	26	M.	W.	1	.....	1 yr.....	Division, knife.....	.....	Yes	.....	.....	.....	1	.....	.....	.....	10 dys...	Good	Cured.
18	40	M.	W.	1	.....	14 yrs...	Knife	.....	Yes	.....	.....	.....	2	.....	.....	.....	3 wks..	Good	Cured.
19	38	M.	W.	1	.....	2 mos..	Knife	.....	.....	.....	.....	.....	1	.....	.....	.....	2 dys...	Good	Cured.
20	34	M.	W.	1	.....	1 yr.....	Clamp and cautery.....	.....	.....	.....	.....	3	1	.....	Yes	.....	.....	Good	Cured.

*21	29	M.	W.	1	.....	3 wks.	Knife	.....	.....	.....	.....	.....	1	.....	.....	.....	1 wk...	Good	Cause: Gonorrheal(?). Cured.
*22	24	F.	W.	1	.....	10 dys...	Knife	.....	Yes	.....	.....	.....	1	.....	.....	.....	1 wk...	Good	Cause: Rectal connection.(?)Cured.
*23	38	M.	W.	.....	.....	2 wks..	Knife	.....	.....	.....	.....	.....	1	.....	.....	.....	10 dys...	Good	Trauma. Cured.
*24	44	M.	W.	.....	.....	10 dys...	Knife	.....	.....	.....	.....	.....	1	.....	.....	.....	2 wks..	Good	Cause: Gonorrheal(?). Cured.
*25	29	M.	W.	.....	.....	3 wks..	Knife	.....	Yes	.....	.....	.....	1	.....	.....	.....	2 wks..	.....	Cause: Gonorrheal(?). Cured.
*26	32	F.	W.	1	.....	2 wks..	Knife	.....	.....	.....	.....	.....	1	.....	.....	.....	3 wks..	.....	Cause: Gonorrheal(?). Cured.
*27	39	M.	W.	.....	1	1 wk...	Knife	.....	.....	.....	.....	.....	1	.....	.....	.....	2 wks..	.....	Cause: Gonorrheal(?). Cured.
*28	31	F.	W.	1	.....	10 dys...	Knife	.....	.....	.....	.....	.....	1	.....	.....	.....	4 dys...	.....	Cause: Trauma(?). Cured.
29	46	M.	W.	.....	.....	15 mos..	Knife	.....	Yes	.....	.....	.....	1	.....	.....	.....	2 dys...	Good	Cured.
30	37	M.	W.	1	.....	3 mos..	Clamp and cautery	.....	.....	.....	.....	2	.....	.....	Yes	.....	2 dys...	Good	Cured.
31	25	M.	W.	1	.....	7 mos..	Ligatures	.....	.....	.....	.....	6	.....	.....	.....	Yes	3 wks..	Good	Cured.
32	28	M.	W.	1	.....	8 yrs...	Finger	.....	.....	.....	1	.....	.....	.....	.....	Yes	1 wk...	Good	Improved, operation repeated three times.
33	31	M.	W.	1	.....	2 yrs...	Clamp and cautery	.....	.....	.....	.....	3	.....	.....	Yes	.....	5 dys...	Good	Cured.
34	42	M.	W.	1	.....	6 mos..	Knife	.....	Yes	.....	.....	.....	1	.....	.....	.....	4 dys...	Good	Cured.
35	4	M.	W.	1	.....	(?)	Knife	.....	.....	Yes	.....	.....	1	.....	.....	.....	2 wks..	Good	Cured.
36	50	M.	W.	1	.....	3 yrs...	Used finger	.....	.....	.....	1	.....	.....	.....	.....	Yes	§	Good	Improved.
37	45	F.	C.	1	.....	4 yrs...	Finger	.....	.....	.....	1	.....	.....	.....	.....	Yes	3 dys...	Good	Improved.
38	29	F.	W.	1	.....	3½ yrs	Finger	.....	.....	.....	1	.....	.....	.....	.....	Yes	2 wks..	Good	Improved and operation repeated.
39	37	M.	W.	1	.....	5 yrs...	Finger	.....	.....	.....	1	.....	.....	.....	.....	Yes	5 dys...	Good	Improved and operation repeated.
40	34	M.	C.	1	.....	2 yrs...	Finger	.....	.....	.....	1	.....	.....	.....	.....	Yes	2 dys...	Good	Improved and operation repeated.
41	29	M.	C.	1	.....	3 yrs...	Finger	.....	.....	.....	1	.....	.....	.....	.....	Yes	4 dys...	Good	Improved.
42	32	F.	W.	1	.....	8 yrs...	Finger	.....	.....	.....	1	.....	.....	.....	.....	Yes	10 dys...	Good	Improved.
43	49	F.	W.	1	.....	3½ yrs	Finger	.....	Yes	.....	1	.....	.....	.....	.....	Yes	6 dys...	Good	Improved.
44	62	M.	W.	.....	.....	10 mos..	.....	1	.....	.....	.....	.....	.....	.....	.....	Yes	.....	Bad..	Nothing done. Carcinoma.
45	48	F.	C.	1	.....	7 mos..	.....	1	.....	.....	.....	.....	.....	.....	.....	Yes	.....	Bad..	Nothing done. Carcinoma.
46	47	M.	W.	1	.....	1 yr....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	Bad..	Nothing done. Carcinoma.
47	26	M.	W.	.....	1	3 yrs...	Finger and knife	.....	Yes	.....	1	.....	1	.....	.....	.....	2 dys...	Good	Improved.
48	46	M.	W.	1	.....	2 yrs...	.....	.....	.....	.....	.....	.....	.....	.....	.....	Yes	1 mo...	Good	Whitehead's operation. Cured.
49	33	M.	W.	1	.....	7 yrs...	.....	.....	.....	.....	.....	.....	.....	.....	.....	Yes	5 wks..	Good	Whitehead's operation. Cured.
50	42	M.	W.	1	.....	5 mos..	.....	‡	.....	.....	.....	.....	.....	.....	.....	.....	None..	Good	Removed foreign body.

* Ischio-rectal abscess. † Carcinoma. ‡ Injury. § Few days.

The following deductions are made from the foregoing table:

1.	White	46
2.	Colored	4
3.	Males	38
4.	Females	12
5.	Syphilitic	22
6.	Tubercular	8
7.	Hemorrhoids (seventeen patients)	48
8.	Fistulæ	23
9.	Strictures	10
10.	Fissures	7
11.	Ulcers	7
12.	Cancers	4
13.	Extensive	23
14.	Chloroform	42
15.	Cocaine	3
16.	Average age	36+years
17.	Loss of time (average)	1+week
18.	Operations	47
19.	Cured	33
20.	Improved	12
21.	Not operated upon	3
22.	No deaths	0

In conclusion I will say that to do rectal surgery it is necessary to have the patient completely anesthetized, and that the use of chloroform is the quickest and best means of securing it. Cocaine has been used in this kind of work very unsatisfactorily. I do, however, give this drug the preference in minor surgery.

As to the clamp and cautery, I rely wholly upon them in removing hemorrhoids of any size or number, it being the safest and quickest method, and enables the patient to be up and about sooner than after any other procedure.

The application of the actual cautery to the entire number of ulcers and fissures at one sitting under the complete anesthesia has been the most efficacious means of destroying them that I have found.

Division of fistulæ with the bistoury has not failed in any attempt to obliterate them, without in a single case destroying the function of the sphincter.

Of the eight cases of ischio-rectal abscess we find five occurring at the time or immediately following an acute gonorrhea. Fistulæ resulted, and were operated upon in each of the eight cases. I believe that acute gonorrhea is the most frequent cause of ischio-rectal abscess in the male; however, an acute inflamma-

tory process, due to any cause, is as likely to produce an abscess, the contents of which may escape into the rectum.

It is interesting to note that thirty of the cases were either tubercular or syphilitic. In the four cases of carcinoma the disease had progressed to such a degree as to render it unwise to attempt a radical operation, except toward the last when colotomy should have been resorted to but was refused.

Case No. 50 was unique in that in falling from a table a piece of ducking, one and a quarter inches square, was driven along the side of the rectum by a chair leg. The foreign body remained concealed for five months without detection, until I was consulted. A portion of the sphincter was torn away, but its office remains good at the present time.

The average loss of time is but little for surgical cases of this nature.

THE NON-OPERATIVE METHODS OF TREATING ANAL FISSURE OR IRRITABLE ULCER OF THE RECTUM.*

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When anal fissure is of recent origin and not associated with much spasm of the sphincter muscles, there is a fair prospect of cure without operative procedure.

This statement is made advisedly, and in the face of a criticism (published in MATHEWS' MEDICAL QUARTERLY, January, 1894, Vol. I, No. 1, p. 185,) of the writer's brochure, Fissure of the Anus and Fistula in Ano (Physician's Leisure Library Series, 1892, Geo. S. Davis, publisher, Detroit, Mich.), in which the following statement is made: "It is a pity that this admirable little work wastes so much time in discussing the palliative (?) treatment of the disease" (Fissure).

"An affection so simple in its etiology and pathology, and that can be so quickly and radically cured by divulsion of the sphinc-

* Read before the American Medical Association, June, 1894.

ters, it seems a great loss of time to talk about applying ointments, when it is a recognized fact that not one case in ten is ever benefited by their use."

I do not doubt but that the reviewer quoted, honestly expressed himself in the statements made; and, furthermore, that the opinion given, that not one case in ten is ever benefited by other means than operative measures, is based upon personal experience. But I must be pardoned for dissenting from the same views, as my experience, while not an extensive one, is ample to justify a more conservative treatment of many of these cases.

I am well aware that the operative treatment of fissure is a simple procedure, and that the disease is quickly cured by its execution; but I am likewise conscious of the fact that many persons object strenuously to any operation.

No matter how trifling its import be to the surgeon, an operation to the patient is something which is dreaded, and it behooves the practitioner to remember that the majority of persons are unwilling to submit to operation until they are personally convinced that such a course is the ultimatum.

It is my purpose in presenting this paper to indicate how over seventy-five per cent. of the cases of fissure of the anus which have come under my observation, both in hospital and private practice, have been cured by non-operative measures. No less an authority than Allingham (Diseases of the Rectum, fifth edition, London, 1888, p. 215,) states that the curability of this lesion does not depend upon the length of time during which it has existed, but rather upon the pathological changes it has wrought. He also adds that he has cured fissures of months' standing by means of local applications, where the ulcers were uncomplicated with polypi or hemorrhoids, and where there was not any marked spasm or thickening of the sphincters.

It is essential to the success of the treatment of fissure by local applications that rigid cleanliness of the parts be maintained; for this purpose the anus and the adjacent portions of the body should be carefully sponged night and morning and after each stool with tepid water. It is also highly important that attention be given to the condition of the patient's bowels. Regularity of habit should be established, and the evacuation rendered semi-fluid, as figured or hard stools materially aggravate the symptoms.

To accomplish these purposes, enemata or mild aperients should be employed, and the diet must be regulated, the use of bland and unirritating food being enjoined. All drastic purges should be avoided, as they are more or less irritating to the extremity of the rectum. To establish a daily evacuation of the bowels and to render the movement as painless as possible, I am in the habit of ordering an enema of warm water, or one of rich flaxseed tea, say from half a pint to a pint, to be administered every evening; preference being given to the night time, as then the patient can assume the recumbent posture, which, combined with the rest, affords the most relief from subsequent pain.

If the first enemata should prove ineffective, it should be repeated in half an hour. In order to relieve the pain and spasm of the sphincters attending the evacuation, it is well to use a suppository, about half an hour before the injection is employed, consisting of

℞ Ext. belladonnæ..... gr. $\frac{1}{8}$ ad $\frac{1}{2}$;
Ext. opii aq..... gr. $\frac{1}{4}$ ad $\frac{1}{3}$;
Ol. theobromæ..... gr. x.
Misce, et fiat suppositoria j.

Or an ointment of conium may be used, as recommended by Mr. Harrison Cripps (Diseases of the Rectum and Anus, second edition, London, 1890, p. 189):

℞ Ext. conii..... ℥ ij;
Olei ricini..... f ℥ iij;
Ung. lanolini..... q. s. ad ℥ ij.

A small quantity of this ointment should be smeared on the part five minutes before expecting a motion, and again after the bowels have been moved.

In applying any of the various local remedies to an anal fissure it is necessary first to expose the ulcer to view, which can be done by means of the fingers of the operator or his assistant, and to anesthetize its surface with a four-per-cent. solution of the hydrochlorate of cocaine, well brushed in with a camel's-hair pencil or with a piece of cotton attached to a probe. The application of the cocaine may have to be repeated once or twice, at intervals of three or four minutes, in order to obtain the desired anesthetic effect. If any ointment has been used about the fissure, the anus should be subjected to a hot-water douche before

using the cocaine, as this drug will not exert its anesthetic influence on a greasy surface. (W. P. Agnew, M. D., Diagnosis and Treatment of Hemorrhoids, etc., second edition, San Francisco, Cal., 1891, p. 91.)

Among the different remedies that have been used in the local treatment of fissure of the anus may be mentioned the following: Nitrate of silver, acid nitrate of mercury, fuming nitric acid, carbolic acid, sulphate of copper, the actual cautery, and chloral hydrate.

Of these topical applications the nitrate of silver is the best. Its effects are various; it lessens or entirely calms the nervous irritation which is so important a factor in producing spasmodic contraction of the sphincters; it coats and shields the raw and exposed mucous surface by forming an insoluble albuminate of silver; it destroys the hard and callous edges of the ulcer, and tends to remove the diseased and morbid action of the parts.

The form in which I usually employ this salt is in solution, from 10 to 30 grains to the ounce. The stick caustic may be also used.

To accomplish the best results the solution should be used once in twenty-four or forty-eight hours, according to circumstances. It may be applied by means of cotton attached to a silver probe or to a piece of wood.

The application is made by separating the margins of the anal orifice with the thumb and index finger of the left hand, and introducing into the anus the probe charged with the solution. The argentic nitrate is to be applied to the fissure only; a few drops are all that is required. If thorough local anesthesia has been induced by the use of cocaine, the application of the silver salt produces little (if any) suffering, for by the time the anesthetic has lost its effect the otherwise acute pain of the nitrate of silver will have passed away.

After each application the part should be smeared well with an ointment of iodoform (30 grains to the ounce). The odor of that drug may be disguised by a few drops of attar of roses. Iodol may be used instead, and in the same way, but I prefer the iodoform, owing to its anesthetic qualities.

After the ulcer has been touched once or twice with the silver solution the effect will be, in the cases that are benefited by this

treatment, a considerable mitigation of the pain from which the patient suffered when at the closet and afterward, and the sore will present a healthy, granulating appearance, and will slowly contract in size.

Unless the fissure be complicated with some other affection, in children and in young persons it is almost always curable by adopting the mode of treatment laid down.

Some authorities speak highly of the use of the acid nitrate of mercury, fuming nitric acid, carbolic acid, the actual cautery, etc., but in my opinion their employment is attended with more suffering than follows the use of the nitrate of silver.

The daily introduction of a full-sized bougie, made of wax or tallow, will sometimes act beneficially in cases of fissure by stretching the sphincter and producing such an amount of irritation as will set up a healing process in the ulcer. An application of cocaine or of belladonna ointment should be made to the part previously to its employment.

In the treatment of anal fissure Allingham strongly advocates the local use of the following ointment:

℞ Hydrarg. subchlor..... gr. iv;
Pulv. opii..... gr. ij;
Ext. belladonnæ..... gr. ij;
Ung. sambuci..... ʒj. M.
S. To be applied frequently.

He states that he has had many cures with this ointment alone. Another excellent ointment recommended by this same authority is:

℞ Plumb. acetatis..... gr. x;
Zinci oxidi..... gr. x;
Pulv. calaminæ..... gr. xx;
Adipis benzoinat..... ℥ss. M.

An ointment of the oxide of mercury, thirty grains to the ounce, has cured many cases.

In conclusion, I would emphasize the fact that in many cases anal fissure, when uncomplicated with some other rectal affection, is curable by means of non-operative methods of treatment.

1610 Arch Street.

A NEW BLOODLESS OPERATION FOR THE EXCISION OF HEMORRHOIDS, WITH HEALING BY FIRST INTENTION.

BY H. M. BISHOP, M. D.
LOS ANGELES, CAL.

[Written for MATHEWS' MEDICAL QUARTERLY.]

In the domain of surgery no field has been fought over more energetically in modern times than that which pertains to operations on the rectum, and particularly to the removal of that most important because so common and distressing ailment, hemorrhoids. The most valorous determination to rescue its treatment from the uncertainties and vagaries of empiricism and to establish it on sound surgical principles, has actuated the advocates of the various methods now in vogue.

Believing that a process of dealing with hemorrhoids, evolved from my own conceptions after many years of contemplation and trial in devising means to harmlessly control hemorrhage while excising the tumors and redundant folds of the rectum, and likewise to hold in perfect and undisturbed coaptation the edges of the incision, will receive favorable consideration from intelligent and unbiased promotors of advanced surgery, I will, without further consumption of valuable time, enter *in medias res* with as little vexing of the polemics of the subject as possible.

The following is the *modus operandi:* With a lateral or dorsal decubitus, as convenience or expediency may decide, and with an aseptic perineum and dilated sphincter, gently and smoothly clamp the base of the hemorrhoids with suitable forceps, so as to parallel the approximated surfaces and free them from folds and other inequalities; then, having left room between the clamp and adjacent healthy tissues, apply on either side a sufficient length of rubber tubing five or six millimeters in diameter, with a lumen of one millimeter, and secure with aseptic catgut after the general manner of the quilled suture. To assure accuracy of adjustment the pieces of tubing should be of the same length and have corresponding marks six or eight millimeters apart, indicating the locations for the sutures. Each tube should have its extrem-

ities hermetically sealed by the sutures there tied, thus adding a degree of pneumatic elasticity to that possessed by the rubber. All the sutures should be preapplied or tied beforehand to one of the pieces of tubing, with threaded needles in each of the opposite loops, ready for transfixing the tissues and tying over the other piece of tubing. Remove the forceps, and excise the tumor close to the rubber tubing with flat scissors. I have sometimes varied the fixation of the tubing by using one piece doubled upon itself and drawn together with a continuous suture, made to assume an advancing figure of eight, or double spiral, by passing the needle always close to the forceps and the thread always encircling the tube from below upward; the perforations then are in one line and the tension evenly distributed. Where many stitches are to be taken it saves the time consumed in tying. This completes a bloodless operation, for the elasticity of this welted suture supplies sufficient pressure to prevent all hemorrhage, and maintains in perfect and uniform contact the margins of the wound without endangering by local asphyxic and necrotic conditions consequent to rigid clamping, and without interfering with the plastic exudation of repair by first intention.

The further dressing of the wound consists simply in passing a strip of moist borated gauze into the rectum, leaving an end protruding from the anus. The catgut sutures soften in due time and permit the tubing to pass away, while the flexibility of the latter has adapted itself to the environments with the minimum of annoyance to the patient.

What the Esmarch bandage is to amputation, the same is this elastic quilled suture to the removal of hemorrhoids or other angiomas from surfaces sufficiently lax to allow of approximating folds of sound tissue at their base. Compared with the ligature it possesses all its advantages with none of the disadvantages attendant upon the distorted, puckered strangulation of the parts, followed by sloughing and ulcerative healing. The clamp and cautery also leaves surfaces of crushed and lacerated tissue which the hot iron at best must transform into a burn of the second grade, with inevitable cicatricial contraction. Whitehead's operation is prolix, tedious, and wasteful of the vital fluid. The injection of carbolic acid is unreliable and precarious, save in expert hands, and even then we must wait for nature to expel the

mummified mass and fill in with granulation before the cure is perfect. The accidents and lack of success that have been known to attend these various methods are apologetically attributed by their champions to unskillful hands. I feel confident that this new method will succeed with those who make no claim of extraordinary cleverness. It approaches the ideal of operative *exeresis* and attains the *desiderata* of all surgery—speedy and clean removal of the condemned part, economy of blood, and primary union.

A SYNOPSIS OF ONE YEAR'S WORK IN RECTAL AND ANAL SURGERY AT THE K. C., FT. S. & M. R. R. HOSPITAL, KANSAS CITY, MO.*

BY S. G. GANT, M. D.,

Professor Rectal and Anal Surgery, University Medical College, Kansas City, Mo.; Rectal and Anal Surgeon to All Saints' Hospital, Scarritt Hospital, Children's Home, East Side Free Dispensary, and to the K. C., Ft. S. & M. R. R. System.

KANSAS CITY, MO.

[Written for MATHEWS' MEDICAL QUARTERLY.]

Among railway employes I believe there is no class of diseases which is more prevalent, causes more suffering, or induces so many reflex, varied, and sympathetic affections than those occurring about the rectum and anus. I have arrived at this conclusion after having questioned a very large number of such persons to ascertain the relative frequency of these diseases, and almost invariably the reply would be that they had the "piles;" and, as you all well know, "piles" may cover a multitude of diseases, for the laity only recognize two forms of rectal disease, "piles" and "fistula."

When we come to study the habits and every-day life of the average railway employe it is not difficult to understand why so many of them suffer from these diseases. In the first place it is a noticeable fact that nearly all conductors, brakemen, engineers, and firemen suffer from habitual constipation as a result of irregular habits, for many of them have no regular time to sleep, eat, or to attend to the calls of nature. An action is often deferred for hours and sometimes from one day to another as a result of these

*Read before the National Association of R. R. Surgeons, Galveston, Texas, May 9th.

irregularities. We have the natural state of affairs reversed, and the bowel now waits the convenience of the individual instead of the individual accommodating himself to the urgent demands of nature.

If O'Biern's theory of defecation is correct (and I believe it is in the main), the feces, if not expelled at the time the desire to go to stool is felt, are immediately carried into the upper portion of the rectum and the sigmoid by reversed peristalsis, and remain there until the next sensation is felt; and if this, like the previous sensations, is ignored, the bowel after a time loses its sensitiveness and enormous quantities of fecal matter may accumulate in the colon without creating a desire to empty the bowel, and many of these persons do not have more than one movement a week. It at once becomes apparent then that such a condition must be a prominent etiological factor in rectal diseases for several reasons:

1. As a result of pressure on the sensitive nerves painful and reflex disturbances are started, that are described as "rectal neuralgia and coccygodynia."

2. The mass presses on the veins, prevents a return of the blood, and venous congestion of the rectal veins ensues, producing both internal and external piles.

3. The arterial supply is partially cut off, causing necrosis, ulceration, abscess, and fistula.

4. The retained feces undergo decomposition, thus affording a rich field for the rapid multiplication of the septic organism found in this portion of the colon, which readily attacks any abraided portion of the mucous membrane, setting up a proctitis or periproctitis.

5. The feces become hard, nodular, and difficult to expel, necessitating much straining, and now and then a tear in the mucous membrane, which in time becomes an irritable fissure.

6. Habitual constipation predisposes to rectal disease by producing a general relaxation of the various structures of the body.

Admitting now that constipation plays an important part in the etiology of rectal disease, I invite your attention to other things which play their respective parts, and of which very little or nothing has been written. I am of the opinion that the erect posture assumed by employes while in the discharge of their

duties, combined with the irregular, jarring motion of the train, tends to produce a venous congestion of the rectal veins similar to that seen in the lower extremities, for I have frequently noticed, when riding on the train for several hours, that my feet would become swollen while sitting in the upright position or the semiprone when in a chair car. It seems to me that if the position and jarring motion of the train would produce this condition of the veins of the lower extremities in a few hours, it is easy to understand how we might have a permanent congestion of the venous plexuses about the rectum and anus in those whose duties compel them to spend the major portion of their time on the train.

Knowing, as we do, how common these diseases are, and how much suffering they induce, we are forced to admit that they are being almost constantly overlooked by our railway surgeons of to-day; this is very surprising too, when we recognize the fact that there is no class of diseases more amenable to treatment properly applied than those under discussion.

With these few preliminary remarks I now desire to present for your consideration a brief synopsis of my work in "rectal and anal surgery" during the past year at the Fort Scott and Memphis Hospital, Kansas City, Mo., which is under the supervision of our worthy member, Dr. N. J. Pettijohn. There were, in round numbers, thirty cases, which I have arranged in tabulated form. In looking over the table I find that we have treated nearly every variety of rectal diseases. With a few exceptions the men were stout, robust, and in perfect health, barring the rectal trouble and the resultant reflex nervous disturbances, which without an exception immediately disappeared upon the removal of the rectal irritation. Now and then there would be more than one disease present; in such cases I have given prominence to the one that was causing the most annoyance at the time the examination was made, merely mentioning the other as a complication.

You will observe that one third of the patients had hemorrhoids, while only four had fistula; this is the reverse of the usual order of things, for in Allingham's analysis of 4,000 cases of rectal diseases he treated one third more cases of fistula than hemorrhoids; but it must be remembered that St. Mark's Hos-

SYNOPSIS OF THIRTY CASES OF RECTAL AND ANAL SURGERY TREATED AT THE K. C., FT. S. & M. HOSPITAL, 1893 AND 1894.

No.	Age	Occupation.	Diagnosis.	Complications.	Treatment or Operation.	Time of Treatment.	Result.
1	42	Tr. Dispatcher	Several large int. hem.	Malaria and indigestion.	Clamp and cautery.	Six days.	Cured.
2	40	Laborer.	Int. Hemorrhoids.	Cutaneous tag.	Tags snipped off and clamp and cautery.	Six days.	Cured.
3	20	Baggageman.	Int. and ext. hemorrhoids.	Constipation.	Ext. hem. excised. Ligature.	Ten days.	Cured.
4	36	Office man.	Pruritus ani.	Due to ulceration.	Curetted ulcer, applied silver nitrate grs. xv to the anus twice a week.	Two weeks.	Cured.
5	26	Baggageman.	Int. hemorrhoids.	Constipation.	Clamp and cautery.	Seven days.	Cured.
6	30	Laborer.	Ext. hemorrhoids.	None.	Cut off with curved scissors.	Four days.	Cured.
7	34	Laborer.	Multiple fistulæ.	Ischio-rectal abscess.	Ext. sinuses made to communicate with each other and by one incis. with the rect.	One month.	Cured.
8	24	Clerk.	Marginal eczema.	None.	Dil. sulphurous acid.	Three weeks.	Cured.
9	42	Tr. Dispatcher.	Pruritus and ext. hemorrhoids	None.	Excision of piles and application of silver.	Four days.	Cured.
10	38	Laborer.	Extensive ulceration of the rectum.	Very bad diarrhea.	Curetted, cauterized. Balsam of Peru locally.	Three weeks.	Cured.
11	28	Conductor.	Ext. hem. and polypi.	Discharges of mucus.	Ligature and excision.	Twelve days.	Cured.
12	50	Head of construct'n dep.	Very bad internal hem with prolapsus.	General debility and carcinoma of stomach.	Clamp and cautery.	Eight days after operation	Cured of hem.
13	29	Conductor.	Membranous stricture.	Marked constipation.	Incision and dilatation.	Three days.	Cured.
14	30	Laborer.	Ischio-rectal abscess.	None.	Lanced, curetted, and packed with gauze.	Ten days.	Cured.
15	43	Engineer.	Internal hemorrhoids.	None.	Clamp and cautery.	Six days.	Cured.
16	31	Clerk.	Pruritus ani.	Thread worms.	Division of sphincters, injection of lime water and silver to fissures.	Two weeks.	Cured.
17	36	Train Master.	Fistulæ and protruding int. hemorrhoids.	Phthisis.	Hem. removed by clamp and cautery. Fistulous sinuses divided, pak'd with gauze.	Three weeks.	Fist. and hem cur'd
18	43	Brakeman.	Int. hemorrhoids.	None.	Ligature and excision.	Two weeks.	Cured.
19	32	Engineer.	Fissures (irritable).	None.	Dilatation and silver, grs. xv to ounce 1.	One week.	Cured.
20	40	Conductor.	Large internal hemorrhoids.	None.	Clamp and cautery.	One week.	Cured.
21	33	Laborer.	Ulceration and diarrhea.	Frequent stool-straining.	Ulcers curet'd, sphinct's incised fol'd by the local ap. of the balsam of Peru daily.	Two weeks.	Cured.
22	26	Section Boss.	Extensive complete fistula.	None.	Groove director passed from one opening to the other out at the anus, all tissues divided and sinuses curetted.	Three weeks.	Cured.
23	37	Fireman.	Fissures and ulceration.	None.	Dilatation of sphincters, nitric acid to ulcer, followed by daily appl. of silver.	Two weeks.	Cured.
24	29	Engineer.	Mark'd constipation, fissure, hypertrophied sphincter.	None.	Divulsion of the sphincters and balsam applied.	Ten days.	Fis. cured con. imp.
25	32	Brakeman.	Prolapsus and internal hem.	None.	Removed hem. by clamp and cautery, linear cauterization of mucous membrane.	Eight days.	Cured.
26	31	Laborer.	Polypi.	None.	Ligature and excision.	Ten days.	Cured.
27	40	Conductor.	Int. hemorrhoids.	Prolapsus.	Clamp and cautery.	Six days.	Cured.
28	33	Laborer.	Constipation.	Fissures.	Dilatation, massage and application.	Nine days.	Cured.
29	29	Fireman.	Int. hemorrhoids.	None.	Ligature.	Fourteen days.	Cured.
30	31	Laborer.	Complete fistula.	None.	Sinus laid open.	Sixteen days.	Cured.

pital has a wide reputation for the cure of fistula, and, further, that fistulæ are found more frequently in dispensary than private practice, and also that no doubt the occupation of the average railway employe is more conducive to the former than to the latter. The internal hemorrhoids were removed either by the clamp and cautery or by ligation.

I have been in the habit of doing the clamp and cautery operation as follows: After the sphincters had been thoroughly divulsed, the pendulous portion of each tumor was seized with catch-tooth forceps, brought down, and the skin and mucous membrane severed, the pile dissected up, a Polock's clamp adjusted in the incision, the tumor pulled further down, and the clamp tightened. The part projecting on the outer side of the clamp was then cut off with scissors, and the stump cauterized with a Paquelin cautery blade and the clamp removed.

The ligature operation differs from the one just described in that the ligature was placed in the incision and the pile ligated instead of being clamped, after which that portion external to the ligature was excised. The cautery was used more frequently for the reason that I think patients recover more quickly after this operation than after the ligature, and suffer less if the skin is untouched. It has been my experience that we gain almost the entire time from the adjustment of the ligature until it sloughs off, leaving an ulcer to heal, which we had from the start when the cautery was used; further it is a well-known fact that now and then a patient has to be anesthetized again, and piles snipped off with the scissors where the ligature fails to cut its way out. External hemorrhoids were seized with forceps, pulled down and cut off with curved scissors when they were of the "cutaneous" variety (hypertrophied folds of skin). When of the "thrombotic" variety they were transfixed with a sharp-pointed bistoury and the clot turned out and the opening in the vein cauterized.

Polypi were seized, pulled down, ligated, and that portion external to the ligature cut off. The treatment of fissures and ulceration was similar in many respects; the sphincters were divulsed or incised as the case demanded, afterward the rectum was cleansed daily with antiseptic injections; in the mean time some soothing, stimulating application, as the nitrate of silver, fifteen grains to the

ounce, balsam of Peru, fluid hydrastis, solutions of zinc, lead and alum, or such powders as the sterate of zinc, with menthol, ichthyol, and the balsam of Peru, calomel, and the salicylate of soda. The only case of stricture treated was of the most simple form, and was made up of membranous bands stretching across the lumen of the bowel. The treatment consisted in incising the bands at different places until a No. 12 soft rubber bougie passed the constriction easily. The bougie was passed daily until he was discharged from the hospital cured. When there was any prolapsus, linear cauterization was practiced (as recommended by Van Buren) from the anus upward for two inches, leaving the lines about half an inch apart; then three deep eschars were made into the external sphincters an equal distance apart to insure anal contraction, and it is with pleasure that I can say that this is the most satisfactory way to treat this most annoying condition.

Simple complete fistulæ were treated in the ordinary way, that is to say, a grooved director was inserted into the external opening through the internal, brought out at the anus, and all intervening tissues divided. Case No. 7 was of the "horse-shoe variety," and had three external openings, one on either side about two inches from and a little below the anus upon the buttocks, while the third was situated about one inch posterior to the anus in the median line. A probe could be passed through the outer sinuses and out at the opening in the median line; these were first divided and made to communicate with each other and with the central sinus which opened into the rectum or one and a half inches above the anus; the latter was then incised; this left a T-shaped wound wherein all the sinuses had been divided, yet the sphincter muscles had been severed but once, and then at a right angle. The most important step in the operation for horse-shoe fistula is to cut the sphincters as few times as possible, else incontinence may follow, and it has been observed that the latter is very likely to follow even a simple operation for fistula, where the muscles have been severed at an oblique angle.

Each of the cases of pruritus was treated differently. I first endeavored to find the cause and remove it, and thereby cure my patients. In one case it was due to ulceration, another to external piles, and still another to thread-worms in the folds of the mucous membrane of the rectum; the case last named I treated

by frequent injections of lime and salt water for one week, at the end of which time the worms were destroyed; then by the aid of stimulating applications for a week longer to the erosions of the skin I was enabled to send my patient home perfectly well. The case of marginal eczema was cured in a few days by the frequent application of dilute sulphurous acid to the affected parts.

These patients were prepared for the operation by taking a brisk cathartic the morning previous to the operation, to be followed one hour before the same by a copious injection to insure that the bowel was emptied of all feces. The diet consisted for the first few days of liquid and semi-solid foods. In concluding this report I desire to call your attention to the fact that we have not had a single death, that the treatment caused very little if any more suffering than the patients had been accustomed to before it was started, and further, that a cure was effected in every case, which goes to prove that the statement made in the beginning of this report to the effect that rectal diseases are readily amenable to treatment properly applied is correct.

LECTURES ON RECTAL AND GASTRO-INTESTINAL SURGERY, WITH DEMONSTRATIONS.*

BY H. O. WALKER, M. D.,

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DETROIT, MICH.

Lecture I.

Gentlemen: In presenting this brief course of lectures upon so important but neglected a subject, it is with a hope, first, that you may be induced to study and investigate this class of diseases with greater zeal than is usually done by the general practitioner, at least to the extent that a correct diagnosis be made, although you may not wish to further care for them. Second, it is earnestly desired in so doing that you will prove benefactors to your *clientèle* and shield them from a horde of charlatans that are now

*Synopsis of a course of six lectures delivered before invited physicians and the senior class in the amphitheater of the Detroit College of Medicine.

hovering abroad the land seeking to mutilate the rectums of the guileless public. These fellows, like thieves that they are, have grown bold and banded themselves together under the high-sounding title of "orificial surgeons." The profession is largely responsible for this condition of affairs. A patient with a rectal trouble usually has made a diagnosis before consulting a physician, and nine times out of ten the physician makes no examination, takes the statement for granted, and prescribes either cathartic, ointment, or lotion as the case may be. The same thing is repeated, simply reversing the order of treatment, and the patient is no better. Having lost faith in his physician as a rectologist he either suffers on or drifts into the embraces of a charlatan. This is a lasting shame to our profession and needs rectifying. You would not take a patient's statement for granted that his leg was broken, but you would examine, find out, and treat him scientifically. The same action in regard to a trouble of the rectum would resound with credit to yourself and relief to your patient. If you are liable for imperfect care of a broken leg, you should be equally liable for imperfect care of a rectum. Fortunately for us a rectum is rarely shown up in court.

I assure you that there is no class of diseases so amenable to relief as are rectal diseases when given careful examination and scientific treatment.

RECTUM.

Anatomy and Physiology. A knowledge of the diseases of the rectum would be incomplete without an acquaintance with its anatomy and physiology. I therefore ask your attention briefly to the subject. The rectum constitutes the last portion of the alimentary canal, commencing at the sigmoid flexure and ending at the anus. It is club-shaped at its lower portion above the sphincters and is capable of great distension, as is often observed in fecal accumulation. An examination of an empty rectum with the finger gives an impression of having entered a great cavity. Its structure is composed throughout of three coats, namely, muscular, connective tissue, and mucous membrane, while its upper portion has an additional one of peritoneum, the same as is found in the other portions of the intestines. The mucous membrane is of a brighter color than is found in the rest of the bowel, and quite loosely attached to the connective tissue layer, permitting it

to hang more or less in folds which assume a vertical position as they approach the anus, appearing as columns which have received the names of the columns of Morgagni. These columns are undoubtedly the interstices between the bundles of the longitudinal fibers of the muscular coat. Just above the muco-cutaneous junction the columns blend with each other and form the sacs of Horner. In old people, and in those whose rectums become lax for any reason, the sacs become large. Of late years these sacs have assumed a significance from the fact that the "orificial surgeon" has made bold to excise them, regarding them as an evidence of a serious rectal trouble, while in fact they are simply a part of the normal structure of the rectum. The connective tissues furnish the medium for the distribution of the rectal blood supply.

The muscular coat is the frame-work of the rectum and is composed of external longitudinal and internal circular involuntary muscular fibers, which are blended more or less with the bladder and several of the rectal muscles, also sending prolongations through the connective-tissue coat to the mucous membrane.

Peritoneum. The peritoneum is reflected around the third division of the rectum, forming what is called the meso-rectum, which is attached to the sacrum anteriorly. Between the layers are found the veins, nerves, and lymphatics of the lower rectum. These layers are then reflected forward to the bladder in the male and the upper vagina and the posterior part of the uterus in the female, forming what is known as Douglas' *cul-de-sac.* It is of surgical importance to know the various positions of the peritoneum, for in the young child it drops down to the prostate about an inch from the anus, while in the adult it varies from two and a half inches to six inches above the anus, depending upon the extent of the distension of the rectum and bladder, also upon the position of the vagina and uterus. Although the name rectum indicates that it is straight, yet on examination we find that as it passes over from the left sacral articulation to the middle of the sacrum there is a slight lateral curve. It has two antero-posterior curves, the one occupying the sacral concavity and the other near its exit where it gradually points backward. Exceptions to this rule, however, are frequent. The length and caliber of the rectum have great variations, depending upon the size of the individual to whom it belongs.

Divisions. Anatomists divide it into three portions, commencing from above downward. The last portion is approximately an inch and a half in length, and extends in the male from the anus to the prostate gland, while in the female there is no fixed point further than the distance mentioned in its relation with the vagina in front. The middle portion is likewise approximately three inches in length, having for its upper ending a point opposite the third sacral vertebra. The length of this part is often considered as the distance from the apex of the prostate to the point of the peritoneal attachment in front, a very uncertain quantity.

The first part is four inches more or less in length, measuring from the point of the third sacral vertebra to the commencement of the sigmoid flexure. Taking these measurements collectively the rectum is eight and a half inches in length, yet, as has already been said, it will depend upon the size of the individual.

Surgically we divide the rectum into two parts as in the urethra, viz., fixed and movable. The first is all that part below the levator ani, and the latter all that part above it.

Relations. The relations of the rectum in front from below upward are the fixed portion of the urethra, prostate, base of bladder, peritoneum, and intestines. In the female its relations in front are the vagina and uterus.

Behind are the sphincters, transverse perinei, recto-coccygeus, and levator ani muscles, sacral concavity, sacral plexus, internal iliac branches, pyriformis muscles, and sacro-iliac synchondrosis, while the sides below the levator are surrounded by a thick cushion of fat and areolar tissue of the ischio-rectal fossa.

Muscles. Of the two sphincter muscles that guard the outlet the external is by far the most important, as it performs the office of closing the anus, at the same time opposes at will the several aids to defecation, and is composed of voluntary muscular fiber. It arises from the tip of the coccyx, dividing into two portions as it approaches and surrounds the anus, when it again comes together and is inserted into the median *raphe*, sending fibers to the transverse perinei muscles in the male and sphincter vaginæ in the female, as well as integument surrounding the anus. It plays a *rôle* of great surgical importance, as we shall allude to in treating of the various rectal and anal difficulties.

The internal sphincter is composed of an involuntary muscu-

lar band about half an inch in breadth, and separated from the external sphincter by a deposit of fat imbedded in areolar tissue. Although somewhat thicker, it is a continuation of the circular muscular coat of the bowel and is one of the aids of fecal propulsion.

The transverse perinei muscles act as powerful aids to defecation, embracing as they do the anterior portion of the rectum.

The levator ani together with the ischio-coccygeus muscle, is a two-bellied, inverted, muscular cone surrounding the rectum at its upper fixity and is the diaphragm of the pelvic cavity, supporting the pelvic viscera. It is attached in front to the pubic arch, then by aponeurosis to the spine of the ischium, and thence on to the tip of the coccyx and pyriformis muscle, sending blending fibers to the various anal muscles, prostate, bladder, and rectum. Aside from supporting the pelvic viscera it helps fix the coccyx and is a powerful aid to defecation.

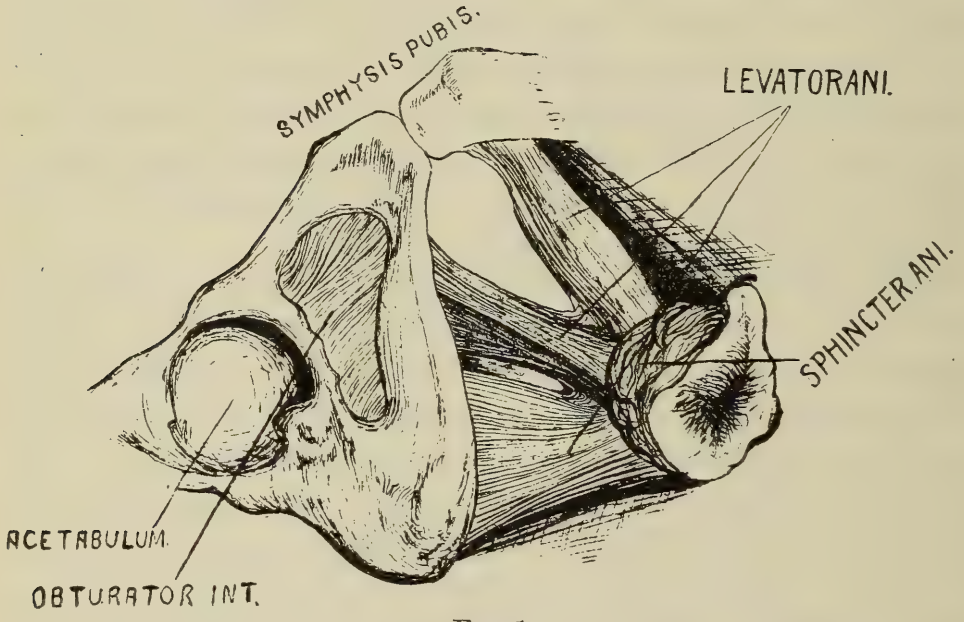

FIG. 1.

The recto-coccygeal is situated below the levator ani; arising from the coccyx it bifurcates and grasps the lower end of the rectum posteriorly, acting as an additional aid to defecation.

It will be seen from this brief description of the anal and rectal muscles that a disturbance of any one of them either by trauma or disease would be distressing and interfere seriously with their physiological function.

Arteries. The vascular supply of the rectum is derived from the superior, middle, and inferior hemorrhoidal arteries. The superior hemorrhoidal is a branch of the superior mesenteric,

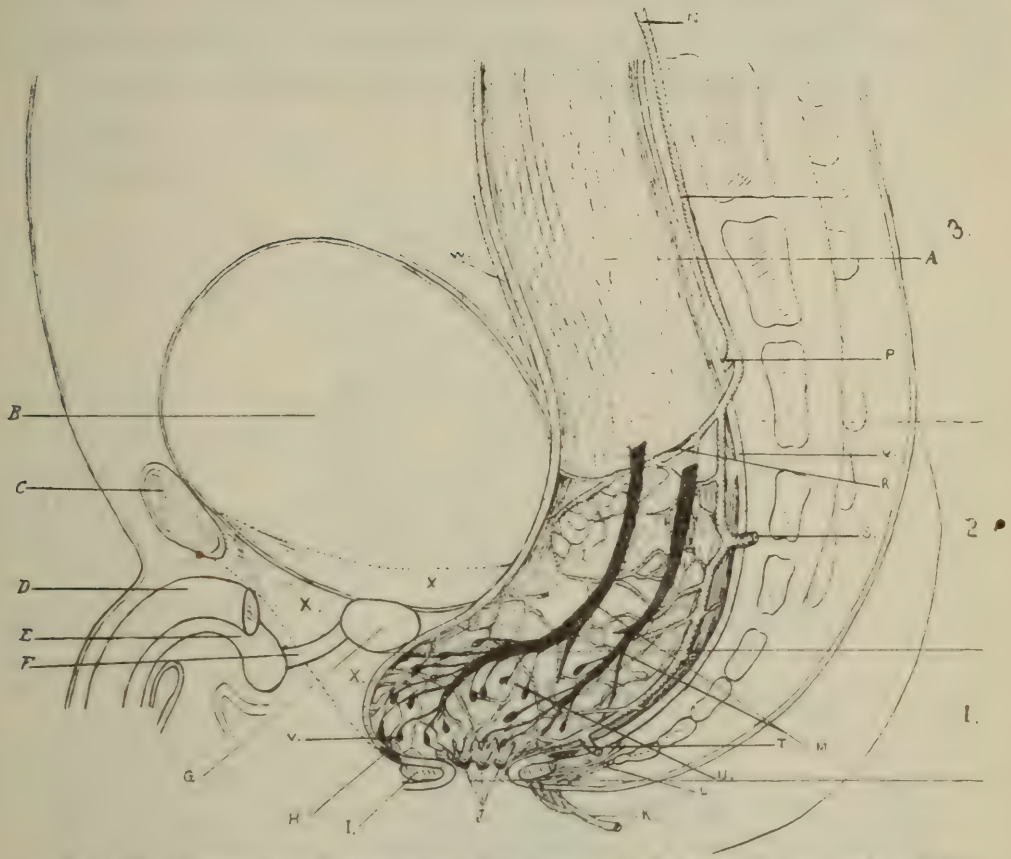

FIG. 2. Composite Diagramatic Section of Pelvis, with particular Reference to the Rectum. (*C. L. Stewart*, '94.)

1. First division of rectum from anus to tip of prostate.
2. Second division of rectum from tip of prostate to middle of third sacral vertebra.
3. Third division of rectum from third sacral vertebra to ilio-sacral synchondrosis.

A—Interior of rectum.
B—Distended bladder.
C—Section of pubis.
D—Corpus cavernosum.
E—Bulb of urethra.
F—Urethra.
G—Prostate.
H—Internal sphincter.
I—External sphincter.
J—Saccules of Horner.
K—External hemorrhoidal vein.
L—Middle hemorrhoidal vein.
M—Internal hemorrhoidal vein.
N—Inferior mesenteric artery.
O—Superior hemorrhoidal artery.
P—Division of superior hemorrhoidal artery which passes behind the rectum.
Q—Wall of rectum.
R—Arterial branch.
S—Middle hemorrhoidal artery.
T—Inferior hemorrhoidal artery.
U—Arterial anastomosis.
V—Venous sacs.
W—Recto-vesical peritoneal folds.
X—Levator-ani muscle.

which divides and enters the rectum from the meso-rectum with its numerous subdivisions about two or three inches above the anus, descending between the mucous and muscular coat, when it anastomoses with the terminal branches of the middle and inferior

hemorrhoidal arteries opposite the internal sphincter. The middle hemorrhoidal varies in its origin, coming either from the hypogastric or inferior vesical, and are two in number.

There are also two inferior hemorrhoidal arteries which are given off from the internal pudic and supply the lowest portion of the rectum and the integument surrounding the anus.

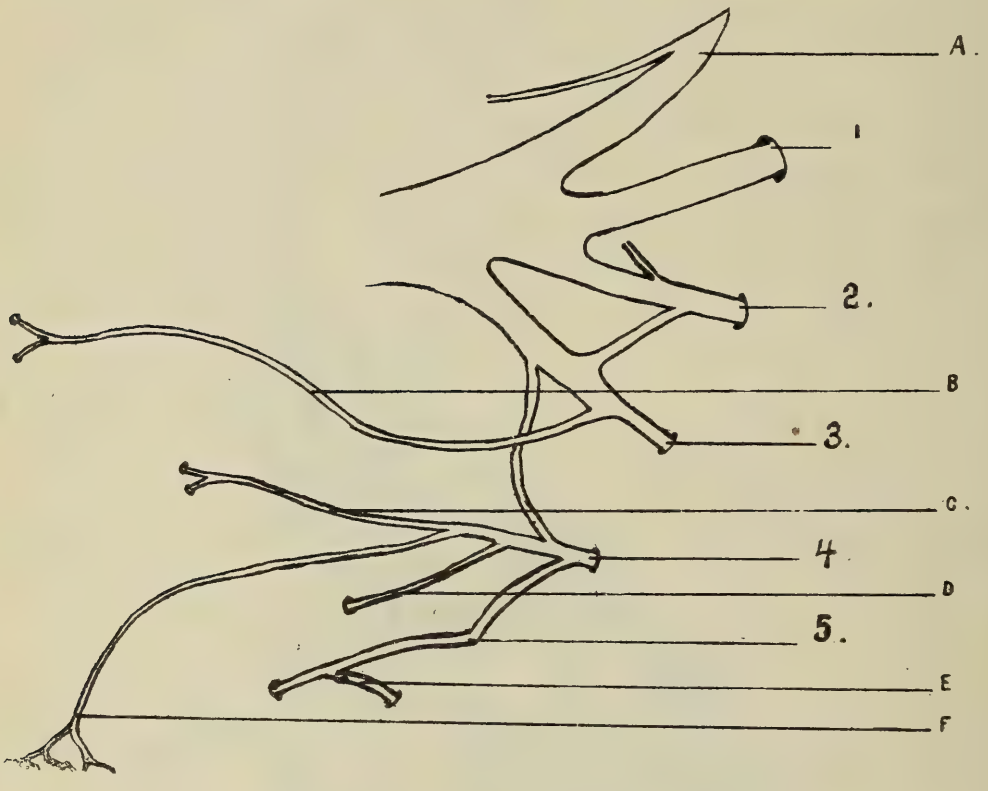

FIG. 3. Sacral Plexus, showing Branch to Sphincter.

1. First sacral.
2. Second sacral.
3. Third sacral.
4. Fourth sacral.
5. Fifth sacral.

A—Lumbo-sacral cord.
B—Vesical branch.
C—Branch to levator ani.
D—Branch to coccygeus.
E—Coccygeal.
F—Branch to sphincter ani.

Veins. The returned blood from the rectum is carried by a like numer of divisions of veins as are the arteries, and represent two systems: one, the superior hemorrhoidal, returns the blood from the rectum to the portal vein; the other, the middle and inferior hemorrhoidal veins, returns the blood from the anus and surrounding integument to the iliac. All these veins have their origin from minute blood sacs, which ascend longitudinally beneath the mucous membrane, and make free anastomosis as well as perforating through the sphincter. (Fig. 2.)

Nerves. A knowledge of the nerve supply is highly essential in determining lesions and reflexes of the rectum.

The nerves supplying the rectum have their origin both from the spinal and sympathetic system. The spinal supply arises from the anterior fourth sacral, a branch from the third, and also one from the fifth, and supply the pelvic viscera and rectal muscles.

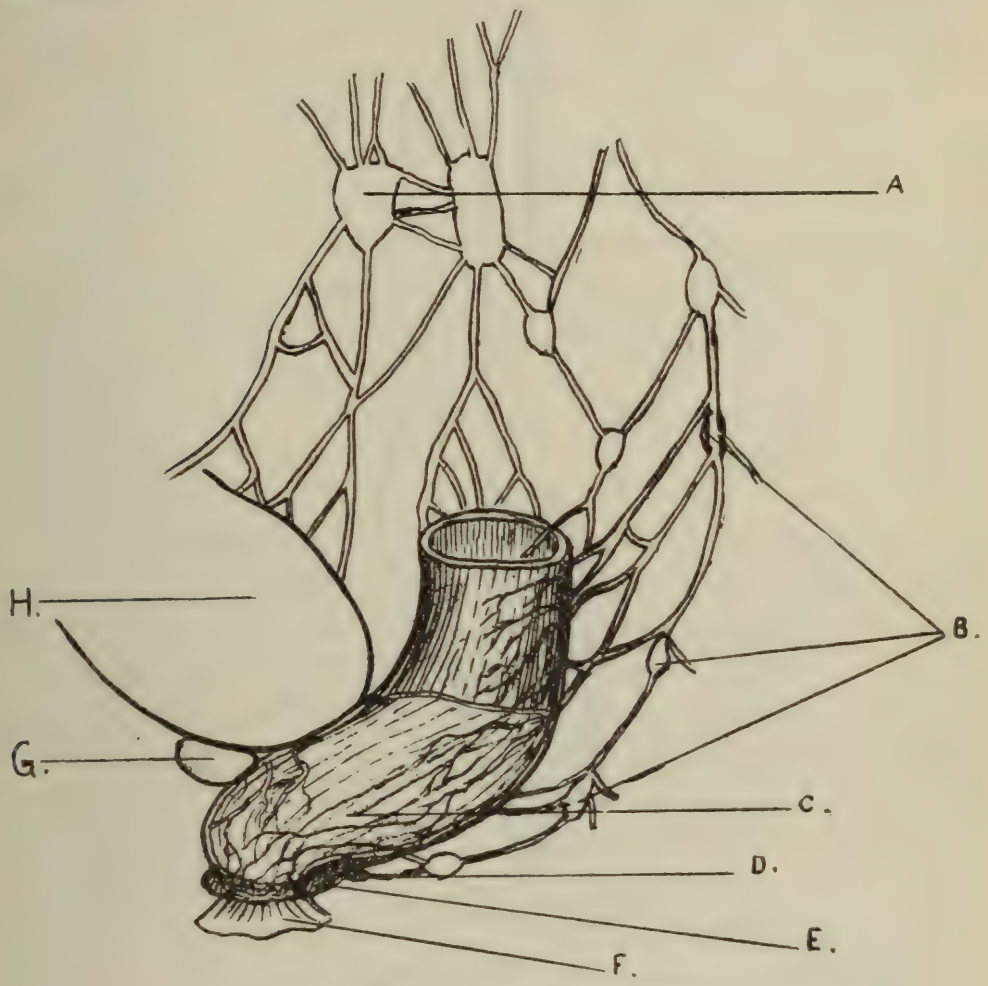

FIG. 4. Sympathetic Nerve Supply.

A—Hypogastric plexus.
B—Sacral ganglia.
C—Interior of rectum showing nervous distribution.
D—Ganglion impar.
E—External sphincter.
F—Integument turned down.
G—Prostate.
H—Bladder.

The pudic and posterior sacral nerves send off numerous filaments to the anus and adjacent integument, anastomosing with those from inside.

The sympathetic supply comes from the hypogastric plexus, joining the sacral ganglia as it proceeds downward, connecting

principally with the spinal nerves through the third and fourth sacral. (Figs. 3 and 4.)

It will be seen from this arrangement that the lower portion of the rectum has a very extensive nerve supply, which will explain why a slight lesion at this point is so exquisitely painful, while higher up an extensive lesion may be present without the patient's knowledge of its existence.

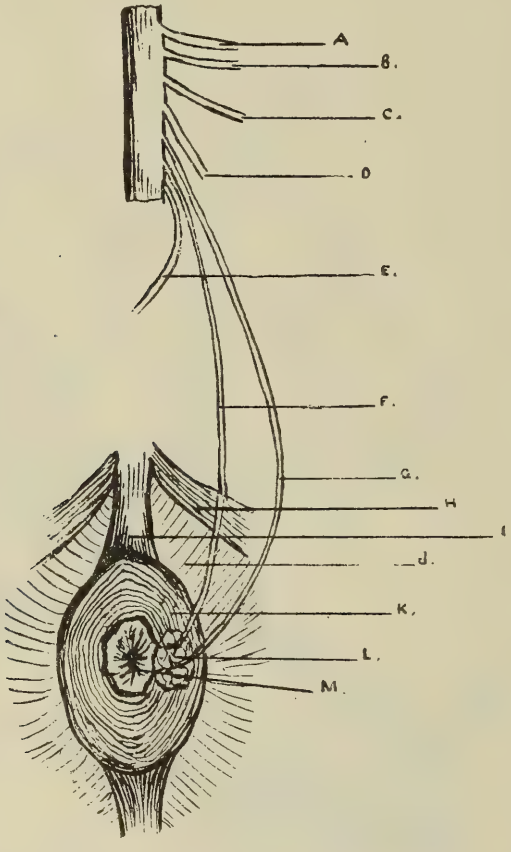

FIG. 5. Anal Nerves.

A-B—Lumbar.
C—Ilio-lumbar.
D—Sciatic.
E—Pudic.
F—Sensory nerve of anus.
G—Motor nerve of anus.
H—Transversus Perinei muscle.
I—Median *raphe*.
J—Levator ani.
K—External sphincter.
L—Ulcer on sphincter representing mechanism of spinal nervous excitation through filaments from spinal cord, *F* and *G*.

A simple fissure of the anus beautifully illustrates the reflex phenomena in the action of the motor-sensory nerves that supply the site of the ulcer, which is shown in Figure 5, a diagram by Hilton.

DEFECATION AND CONSTIPATION.

Much has been said and written upon these subjects, yet I will endeavor to present them as tersely as possible, and as they are closely allied it seems fitting that they be considered together.

An individual with a normal fecal evacuation has but little use for a rectologist, yet he who disregards nature's call and finally becomes a chronic constipationist, is often a visitor to our offices, for of all the causes of diseases of the rectum none stand out so prominent as constipation.

The rectum normally should contain but little matter, except at the time of defecation.

When a sufficient mass is collected in the colon, nature admonishes the necessity of an evacuation on its arrival at the sigmoid flexure. Then the diaphragm and abdominal muscles contract, the sphincters relax, and with the aid of the other rectal and anal muscles the act is consummated. This constitutes a normal evacuation. The act, Foster says, is largely under the control of a lumbar nerve center.

If this admonition is disregarded the fecal matter remains in the rectum or is partially pushed back into the sigmoid. A repeated disobedience to this admonition finally ends in a rectal impaction, often extending back as far as the cecum.

In these days, when so much is said about appendicitis, impaction with feces may be mistaken for this disease. In fact I have seen two cases recently, in consultation, where appendicitis was suspected, yet in one case copious enemas and free use of mild cathartics removed a great mass of fecal scybala, and in the other about a pint of pop-corn. Permit me in this connection to mention another fact, namely, that I have seen, as others have, a fecal impaction with a persistent diarrhea present. In these cases examination revealed a great, hard fecal mass, which necessitated mechanical measures for its removal. Fecal impaction may occur anywhere in the colon.

Although constipation as a rule creates a general disturbance of the system by its toxemic effects, yet occasionally we meet with cases which have the constipation habit in the extreme, but it does not seem to produce any serious defect. I have in mind a journalist of this city, who was the victim of this habit

for years, and had intervals of weeks without an evacuation, the limit in one instance being fifteen weeks, without any apparent detriment to his health, except for hemorrhoids and fissure that it finally produced. These I operated upon by ligature and divulsion, when his constipation disappeared. Divulsion, by the way, I have found to be a great reliever of chronic constipation. This I have frequently observed after operations for hemorrhoids when the constipation habit existed. It may not be always possible to get patients to consent to this operation unless there is some disease in connection with it. In lieu of this I instruct and direct my patients to practice massage of the sphincter and lower bowel by means of the fingers, first introducing one finger and gradually sweeping the finger backward and forward until two or more fingers can be introduced. This procedure should be practiced daily for several minutes at a time. It undoubtedly gives tone to the lower bowel. Not only have I observed constipation to be cured by this method, but moderate cases of hemorrhoids and fissures. Another good method is the use of the faradic current, one pole applied to the anus and the other gently rubbed over the abdomen for a few minutes. The galvanic current I have also found of benefit in some cases. It will be observed that I have not made any particular mention of cathartics or enemas as cures of constipation. I regard them as necessary evils, simply mechanical aids for temporary relief. An atonic rectum and colon, made so by the long-continued constipation habit, needs something more than a simple flushing out; it cries out for measures that will give tone to the gut, namely, appropriate food, exercise, increased intestinal secretion, restoration of a defective vaso-motor supply, and strict attention to the morning habit of having an evacuation of the bowels, preceded by either a glass of hot or some of the mineral waters. Conditions that arise from constipation and their treatment will be considered in discussing the various rectal diseases.

EXAMINATION AND DIAGNOSIS.

The proper treatment of diseases of the rectum means a proper diagnosis, and a proper diagnosis means a proper examination. As a rule a patient's history of his case is misleading, for what he regards as serious may be trivial, or just the opposite.

Although I do not give his statement much credence, I do not deny him the privilege of relating it, for by that means you gain the confidence that you would not otherwise do. Yet I do not forget to interpose interrogations at proper intervals. Ocular and digital inspection are the principal aids to diagnosis, and after the preliminary skirmish of history and interrogation I suggest and proceed to examine, for without it no correct diagnosis can be made. It will be well to remember that a thorough examination of the patient generally is necessary, for it is quite possible that what the patent regards as a rectal trouble may be due to some other lesion, as ovarian, uterine, urethral, or bladder trouble. The best position to put a patient in may be either on the side (left preferable), back or genu-pectoral. Most difficulties of the rectum can be determined reasonably well without an anesthetic, yet in a timid and sensitive person, and those with an exquisitely painful lesion, I think advisable to use it. Local anesthesia with cocaine does well in many cases. Where a general anesthetic is to be used the patient should be prepared as for an operation: a mild cathartic the night before, irrigation of the rectum in the morning with a boric-acid solution, and the external parts thoroughly asepticized and covered with aseptic gauze, so that if advisable the necessary operation can be done. My rule is to place the patient on his left side, with the thighs and legs flexed upon a table or an elevated lounge, with a good exposure to the light. The buttocks and anus should then be well separated, which will give a full opportunity for inspection that you may note any anal excrescence, protrusion, fissure, thickening, or excoriation of the integument. Protrusion of internal hemorrhoids or polypi is often possible by directing the patient to strain. You have thus far ascertained all that is possible by inspection. The next step will be the introduction of the index finger, which is best done with the patient on his back. This introduction of the finger should be done gently with a rotary motion, sweeping gradually the walls of the rectum the full length of the finger. In the male the prostate is readily recognized, and in the female the uterus. Internal hemorrhoids are rarely detected by the finger, except in long-standing cases where they have assumed a fibrous condition. The abnormal conditions that are possible of detection are gummy tumors,

malignant growths, contraction of the caliber of the rectum, fecal impaction, polypi, and, in some instances, ulcers. Palpation higher up will call for the introduction of two or more fingers, when with bimanual manipulation it is quite possible to explore as far as the sigmoid flexure. Although I have introduced the whole hand for exploration, yet I can not say that I have been able to ascertain any thing more definite than by the method just mentioned.

Inspection internally can be done by any one of the many specula devised for that purpose, and the use of a reflected light. From the variety of specula I exhibit here to you to-night, I have succeeded best with the tubular speculum of Dr. Cook, of Indianapolis. With this instrument I have been able to see further up the rectum than by any other. The self-retaining speculum of Dr. Mathews is an admirable one, as it permits of inspection of the folds of the rectum which fall between the arms of the instrument. A bivalve does fairly well in some instances. A probe and tenaculum are also aids of value in separating and ferreting out fistulous openings. An educated finger, however, is undoubtedly the best of all means in making out a diagnosis.

27 East Adams Ave.

Ransom, W. B.: Actinomycosis. (*British Medical Journal.*)

The patient was presented before the Royal Medical and Chirurgical Society with actinomycosis of the prostate and rectum. When first seen he was suffering from distension of the bowels and alternating diarrhea and constipation, the stools were occasionally slimy and blood-streaked, and later spherules of actinomyces were found in them. This condition was soon relieved by turpentine enemata, and entirely cured after a course of calomel and β-naphthol. The urine, however, continued to show the spherules. Under iodide of potassium, in doses of a dram daily, the urine cleared up, and the case has remained permanently cured.

Gastro-Intestinal Disease.

THREE CASES IN WHICH THERE WAS FOUND A MECKEL'S DIVERTICULUM.

BY HENRY E. TULEY, A. B., M. D.,
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[Written for MATHEWS' MEDICAL QUARTERLY.]

In the June issue of the *American Journal of Medical Sciences*, 1893, Dr. S. S. Lamb, Pathologist to the Army Medical Museum, contributed an article upon the Meckel Diverticulum, reporting a series of cases which had come under his observation.

Below is appended three unreported cases of this condition—two of which were found at autopsy—the specimens of which I have in my possession. These specimens were obtained during my residence at the New York Infant Asylum, and were the only cases recorded, so far as I know, in three hundred autopsies. The specimen illustrated by Fig. 1 was obtained from a male child aged nine and a half months, who died from lobar pneumonia. The diverticulum arose at an acute angle from the ileum three feet from the cecum, and is 6.5 centimeters in length, measuring from the center of the gut, and was so situated in the abdomen as to allow the intestinal contents, in part at least, to pass into and out of it, and then on through the ileum. At its junction with the ileum its diameter is the same as that of the gut. At its end, which is curled forward upon itself, there is a tumor-like projection with a constriction at its base.

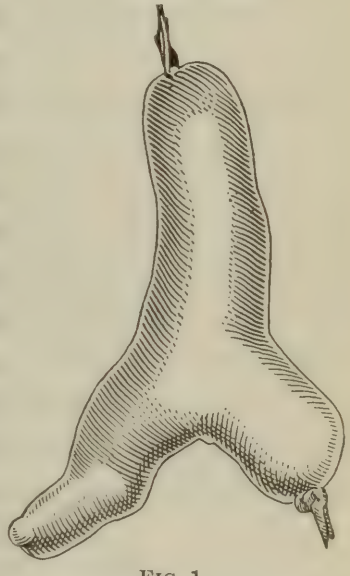


FIG. 1.

Fig. 2 illustrates a specimen obtained from an athreptic child aged four months, the intestine being much contracted throughout. It occupied the same position, relatively, as the one just

described, and measures three centimeters in length. This child died of acute gastro-enteritis. In neither one of these cases was there a fibrous band attaching the diverticulum to the umbilicus or abdominal wall.

As an illustration of a complication which may occur in these cases, as mentioned by Dr. Lamb, through the courtesy of Dr. Ap Morgan Vance, of this city, I report Case 3, which occurred in his practice :

A delicate male child, two and a half or three years old, had been the subject of a reducible inguinal hernia for some months, the parents refusing to obtain a truss for him. On February 5, 1893, it became irreducible and strangulated, Dr. Vance being called upon to operate, for whom I administered the anesthetic. The usual operation for this condition was done, the strangulation having existed for six hours. The sac being cut down upon and contents exposed, they proved to be two coils of ileum projecting through the ring with a Meckel diverticulum wedged in between them, thus making reduction by taxis impossible. Reduction was finally accomplished after some difficulty, by pulling out fully eight inches of the ileum on each side, the returned gut being in good condition. The diverticulum measured at least seven centimeters in length and its lumen was as large as that of the gut. The usual steps for a radical cure were gone through with, the result being satisfactory.

I have been much interested in this condition, but having no literature upon the subject accessible I have not known of its comparative rarity, and report these cases for that reason.

NOTE. Since writing the above the following report of a case of intestinal obstruction, made by Dr. W. T. Councilman before the Boston Society for Medical Improvement, was published in the Boston *Medical and Surgical Journal:*

"This specimen is interesting from the extraordinary manner in which the strangulation was produced. The symptoms came on suddenly, and the patient died sixteen hours afterward. The entire small intestine lies on this plate. At the lower portion of the plate there is a large mass of intestine, which is intensely congested and hemorrhagic. The lumen was filled with almost pure blood. Thus the strangulated portion comprises about one half of the small intestine. A portion of the mesentery attached

to the strangulated intestine is also intensely congested, thickened, and hemorrhagic. A distinct band of constriction separates this portion of intestine from the other. Around this, what appeared to be a loop of intestine was wrapped. At first it was difficult to understand the condition. It seemed as though the strangulation was due to the mass of intestine having passed through a loop in the mesentery immediately beneath the intestine. On emptying the gut and examining the constricting band more closely, it was found to be the diverticulum of Meckel which had become wrapped around the mesentery, with the end passed under, making a complete tie. I here reproduce the condition. Although intestinal strangulation due to Meckel's diverticulum is not at all uncommon, it does not usually take place in this way. The end of the diverticulum may become attached to the peritoneum in various places, and through the loop so formed the intestine may pass. It is difficult to see just how the condition I show here could have arisen. The end of the diverticulum which had passed under the loop was greatly swollen, and this acted as a regular button, and could not return."

111 W. Kentucky St.

APPENDICITIS.*

BY T. J. HAPPEL, A. M., M. D.,

Ex-President Tennessee State Medical Society; ex-President West Tennessee Medical and Surgical Association, etc.

TRENTON, TENN.

[Published exclusively in Mathews' Medical Quarterly.]

Appendicitis and typhlitis are terms used by the general practitioner as interchangeable, but taken in a strict etymological sense typhlitis applies to an inflammation of the cecum. I have, however, decided to adopt the more generally accepted idea and entitle this paper Appendicitis.

Until lately the surgical world was almost unanimously agreed that, if there was one disease about the treatment of which there could be neither cavil nor question, that one was appendicitis. It was agreed among them that the knife was the only resort when there were reasonable grounds upon which to make a diagnosis of appendicitis. Now the surgical world is at sea, and the general practitioner begins to realize that the disease has not entirely departed from his domain.

* Read before the Tennessee State Medical Society.

With these introductory remarks, to which reference may be made later on, I begin with the statement that nothing would be easier than to write a "book article" on this subject, as the current literature abounds in theories, reports, discussions, etc., on appendicitis; but I prefer rather to report my own experience so as, if possible, to induce a free and full discussion of this, at present, important subject—I say important subject, because, if the disease is not recognized, errors in treatment may bring about fatal results.

I do not propose discussing the subject in its entirety, as that would require too much time, but to present the salient features under the different heads of clinical history, etc.

Clinical History. An attack of appendicitis begins suddenly or gradually, depending upon the exciting cause. If it is the result of a foreign body, which, while passing along the alimentary canal, drops into the appendix, then the disease begins at once without any premonitory symptoms; if it is due to an extension of an inflammatory action already existing in the gut, then there are symptoms calling attention to the right iliac region before inflammation of the appendix begins.

In cases of sudden attack, the patient, whose health has perhaps been perfect, finds himself suffering intensely, as a rule, with what he calls colic, but refers the pain to the right groin. This pain may be so severe as to demand the free use of chloroform or morphine, or both, to alleviate it at all. Failing to secure permanent relief from the usual remedies resorted to for colic or neuralgia, the attention is then frequently called to the liver or kidneys, the passage of a gall-stone or renal calculus being suspected.

The diagnostic features of these two diseases, however, are lacking. The use of the thermometer shows a rise of temperature, which may be either gradual or rapid. The fixedness of the pain (the point of greatest tenderness being generally over the appendix, or rather in the line described by McBurney) and its gradual extension from that point invite a careful examination of the whole iliac region. Deep pressure will increase the pain, and, in lean subjects, will usually show a point of enlargement which is extremely tender.

As the disease progresses, this induration increases gradually (sometimes rapidly) till it is plainly perceptible to the eye. When the attack is sudden the patient goes to bed at once and seeks relief from the intense pain, but if the attack is due to an extension of the inflammation along the alimentary canal into the colon and thence into the appendix, constituting a true case of typhlitis, the patient may suffer but slight discomfort for days, finding locomotion, stooping, and movements generally, inducing any pressure in the right iliac region, painful. Chilly sensations, indisposition to move about, loss of strength, anorexia, disturbances of digestion, vomiting, frequent, feeble pulse, perversions of sensation in the right thigh and leg, all mark an invasion of the appendix which comes on slowly. As the case progresses the patient goes to bed.

A case of typhlitis by extension may produce appendicitis (though the term, as already stated, is usually used to include the latter), and later on, by an extension of the inflammatory process to the peritoneal covering of the gut, becomes a case of perityphlitis, and by still further extension of the inflammation to the circumjacent tissues, paratyphlitis.

Appendicitis may exist alone, though this is rarely the case, and so far as a differential diagnosis is concerned, is not material. Of course cases of uncomplicated appendicitis would most commonly develop suddenly, being due largely to the entrance of a foreign body into the appendix.

Etiology. The causes of the disease have been briefly outlined in the clinical history already given. A cherry-pit, blackberry seed, button, gall-stone, fragment of bone, or any other foreign body traveling along the alimentary canal, dropping from the small intestines into the caput coli, may pass at once into the appendix vermiformis and set up inflammation. In the course of a case of typhoid fever, entero-colitis, or any disease producing inflammatory action in the mucous lining of the gut, this inflammation may extend into the appendix and cause the disease. Fecal material may find its way into the appendix and cause trouble. It is upon this *modus operandi* that fecal impaction sometimes causes appendicitis. A stricture produced in any way may give rise to it; an external injury might be the exciting cause; but it is not necessary to enumerate further.

Pathology. The morbid anatomy of the disease can be more easily studied, and more readily comprehended in and from text-books than in a paper like this.

Diagnosis. This ought usually to be easily made, but it has been my lot to see one case of appendicitis mistaken for some obscure "bowel trouble with congestion," and another for typhoid fever, and still another for obstruction of the bowel, which may be the result of either fecal impaction or invagination. The characteristic pain, its fixedness in one location, the tumor gradually growing, etc., ought to render the diagnosis easy. The dysuria, with frequent micturition, and at times an inability to expel the contents of the bladder, may mislead and cause one to suspect prostatic disease even in a child. Again, in the female it is barely possible to mistake the trouble for some ovarian disease, but this should not happen, and a close study of the history of the case will correct or prevent any such error.

A further study of the disease as to treatment, etc., may be better understood by a report of a few cases that have come under my observation and treatment.

Case 1. 1879, R. J., male, aged twelve years. Was called in consultation after the patient had been confined to his bed for seven days. Had been considered a case of remittent fever with a tendency to congestion. Temperature was about 104°; pulse rapid and feeble; features pinched; much pain in the right iliac fossa; restless; bowels constipated; kidneys not acting freely.

On my second visit tenderness had increased; right side of the abdomen enlarged, and very tender along the ascending colon as well as over the caput coli and appendix; no fluctuation; bowel not moved; temperature and pulse about the same as on former visit; pain so great as to demand morphine for its relief. Two days later, on my third visit, I found all the symptoms aggravated, with a special fullness over the transverse colon near the median line. After much difficulty I succeeded in getting the consent of the parents to insert a hypodermic needle into this point. I drew out a half dram of pus having an offensive fecal odor. Thus was made clear a diagnosis of typhlitis in a case that had been treated for a week for remittent fever. No preparation having been made to operate, it was deferred to the next day, but

during the night there were several large discharges from the bowel containing nearly a half gallon of extremely offensive pus. The patient rapidly recovered, and is now, fifteen years later, a stout, strong man, never having had up to this time any further trouble with his alimentary canal.

Here was a case beginning rather insidiously as typhlitis, the inflammation gradually extending till there developed appendicitis, peri- and para-typhlitis, terminating later on spontaneously by perforation of the gut and evacuation in that way. In these days the case would have been operated on at the second visit, with no better result.

Case 2. I. B., aged eighteen or twenty years, colored, male. Had never before been sick. After eating heartily of raisins on the 14th was attacked with what the family supposed to be colic during the night. I was called about day on the morning of the next day and found him suffering excessively, but was not able to get intelligible answers from him. Gave an opiate and soon quieted him. At 10 A. M. I found him with a temperature of 105°; abdomen tympanitic and excessively tender; pulse rapid, wiry, and irregular; features pinched; prostration decided; patient delirious; diagnosis, general peritonitis.

Each subsequent visit that day found him growing worse, till death came to his relief, about twenty-four hours after the first development of his severe symptoms. Up to the time of his death nothing was known of his eating raisins, and I must confess that while I diagnosed peritonitis I could assign no cause for it.

A *post-mortem* was obtained the next day, the family thinking that he had been poisoned. When the abdomen was opened a most extensive case of general peritonitis was uncovered. A painstaking examination of the matted intestines showed a perforation of the appendix and a grape seed in the right iliac fossa. Here was a fatal case of perforative appendicitis terminating before it was possible to make a diagnosis. My opinion now is that perforation took place about the time of the hypodermic injection of morphia, and during this period of rest, the system being saturated with the opiate, the first stage of peritonitis was thus masked. As the obtunding effects of the morphia passed off, then there were present symptoms of general peritonitis alone.

However this may be, my patient died before I correctly diagnosed the case.

Case 3. W., colored, female, aged about thirty-five years; previous health good. Found her suffering with obstinate constipation, though there had been several watery evacuations during the day from the bowels. Right iliac region very tender, so much so as almost to forbid an examination without an anesthetic. The region of the caput coli was filled with a large, hard tumor. Having ascertained that there had been no free evacuation of the bowel for about one week I had carried my Truax pump with me. Turning the patient on her right side I inserted the long rectal tube of the pump its full length, and proceeded to fill the gut with water as hot as it could be borne. A small evacuation was obtained, and she expressed herself as feeling much better. I ordered administered during the night large doses of salts every four hours till a full evacuation was obtained. The next afternoon the husband reported that a very large evacuation had been finally obtained containing many hard, dry concretions of fecal matter, very offensive, and that this had been followed by others of a more watery character; that his wife expressed herself as feeling much better. Simple measures were employed to allay the irritation in and around the cecum. Two days later, March the 14th, found her still sore and swollen in the right iliac region. Ordered the bowels kept freely open with sulphate of magnesia, turpentine stupes to be applied over the tender region, and put her on a tonic. About a week later she was reported improving, which continued till March 30th, at which time she, having been able to be up and attend to some of her household duties for a week or more, concluded to, and did visit a neighbor, distant a few hundred yards. She walked across corn rows, and returned home feeling somewhat sore. On April 2d I found that all her old symptoms had returned with increased violence. Deep palpation and percussion did not reveal the presence of pus, but every other symptom pointed in that direction. Expecting to operate, I returned the next morning and found that during the night a sudden and free discharge of pus had taken place *per vaginam*, and all pain and inconvenience rapidly subsided, and I was saved the necessity and danger of a deep dissection after a laparotomy.

Here we had a case, commencing as typhlitis from impacted feces, relieved without surgical interference, a case in which there would probably have been a relief from all inflammatory action by resolution, had the patient been content to have waited till nature had finished her work. The patient made a rapid and perfect recovery.

Case 4. Mr. E. C. T. called me on April 22, 1893, to see his little boy, aged three years, who was suffering from a violent pain in the right iliac region. He gave a history of entero-colitis existing for two weeks prior to my visit. The child was examined with much difficulty, showing the characteristic symptoms of typhlitis with appendicitis. The treatment in this case was purely expectant, efforts being made to keep the bowels and kidneys active and at the same time to make the child rest. The kidneys acted poorly, and it was with great difficulty at times that the bladder was evacuated, the catheter being used on several occasions. It finally became impossible to enter the bladder with the smallest sized catheter, and for several days the child was able to expel only about half an ounce of urine three or four times a day. For several days not more than one ounce of urine was passed in all in twenty-four hours. The tumefaction steadily increased, the whole of the right side of the abdomen being enlarged and very tender. No satisfactory examination could be made without an anesthetic. Just at the time that a laparotomy seemed the only course left, following a free evacuation from the bowels, produced by a full dose of sulphate of magnesia, there was discharged nearly a half pint of offensive pus having a fecal odor. At intervals during the day and night the discharge of pus continued *per rectum* till the whole amounted to about a full pint. On the morning of May 5th, the date of my last visit, I found the patient bright and playful, with much less pain and willing to be examined. From that time on, his improvement was uninterrupted, and he is now perfectly well. At the end of the first week of his sickness resolution set in, but his parents, deceived by his improved condition, encouraged him to walk and play, when the inflammation returned and went on to suppuration.

Case 5. May 16, 1893, was called to see Mrs. R., aged about forty-five years; fine physique. Previous health had been good

for one at her time of life, except that she had often suffered with what she thought to be neuralgia of the left ovary. I found her suffering with severe pain in the right iliac region, which she had diagnosed as colic. The attack was sudden, though there had been some soreness in that region for several days. At the time of my visit her pulse was frequent, regular, and her temperature normal. Upon her refusal to take morphia hypodermically, I gave her pulv. ipecac. comp. for the relief of pain, and ordered turpentine stupes applied as hot as could be borne, and directed calomel, one fourth grain, every two hours till one grain had been given, to be followed by one ounce of magnesia sulphate. This produced a small action composed almost entirely of scybala. Later on the rectal tube, twelve or fifteen inches long, was used, and the rectum and colon emptied. After two weeks of intense suffering, the tumefaction in the right iliac region being plainly marked and very tender, demanding several times a debate with myself as to the propriety of an abdominal section, resolution took place, all the symptoms slowly subsiding. The patient was dismissed June 7th, but reported daily for a week or so. Is now in perfect health.

Here we evidently had a case of typhlitis, with probably an appendicitis, due to impacted feces.

Case 6. Was called in consultation September 6, 1890, to see the daughter of Mr. McC., aged fourteen years, who was reported by the attending physician to be suffering with typhoid fever. The first visit revealed appendicitis plainly, but with no pus as yet. September 19th, second visit, found right iliac region distended and glazed. The hypodermic syringe revealed pus in abundance. The family had still regarded the case as one of typhoid fever. September 20th, made an abdominal section. The appendix could not be removed. Two quarts of pus were removed from the cavity. This case was reported in full, in 1891, in a paper read at the meeting of the State Medical Society that year. I will briefly add that a prompt recovery followed the operation, and that she now is in perfect health in every way. Has had no further attack of appendicitis.

Case 7. Mrs. E., was confined in November. Labor normal in every respect. Ten days after her accouchement, she began to suffer with pain in the right iliac fossa. Bladder very irritable.

Temperature elevated about two degrees. Pain increased gradually. Tumefaction was plainly shown on deep pressure. The uterus soon became fixed. Although she had reported that her bowels were acting regularly, I gave her about two ounces of magnesia sulphate, which caused three or four large actions from the bowels. Fever began at once to decrease, and the tumefaction rapidly disappeared, and the uterus gradually became movable. Here typhlitis from impacted feces was followed by pelvic cellulitis, and both were relieved without an operation.

Case 8. Mrs. H. was attacked, March 13, 1894, with a severe, excruciating pain, located at McBurney's point. Pain was attended by nausea and much depression. When called in, six hours after the beginning of the pain, I found the right iliac region so tender that it was almost impossible to palpate sufficiently to make any examination. Under deep pressure, a slight fullness could be detected about the cecum. Temperature 100°; pulse frequent and feeble; face anxious. No cause could be assigned for the attack. A mercurial purgative, together with ten grains of Dover's powder, was given—the opiate to be repeated *pro re nata*. On the next day all the symptoms were worse. Full doses of Epsom salts were administered, and hot applications were made to the iliac region by means of a rubber bag filled with water as hot as could be borne. The salts produced free watery evacuations, and on the next day the pain and induration were both much less. The salts were repeated and the opiate ordered used if needed. On the fourth day the patient was dismissed, with the injunction to remain in bed and be extremely careful about diet and exercise. On the 21st she was able to sit up for a short time. She is now fully recovered.

I have thus briefly reported eight cases of typhlitis and appendicitis, which have occurred in my work or in consultation where the principal part of the care of the case afterward fell upon me. From these histories, we see that only one of them was fatal, and that death followed in that case within thirty-six hours after the onset of the attack, being apparently due to shock from perforation of the appendix and the development of general peritonitis. No operation could have availed any thing in this case after I was called. In three of the cases, pus developed, and was discovered in two of them with the hypodermic needle, but was discharged

per rectum in all three of the cases, with rapid recovery in each. In one case only, was abdominal section made, and in this case pus to the amount of at least one gallon in all was discharged. Three of the cases were males and five of them females; six were white and two colored. Of course we have not here enough cases from which to deduce any positive rules of procedure, but they serve to show that all cases do not belong to the domain of surgery and do not need the surgeon's knife.

In none of the six cases that recovered could I have gotten better results with the knife than were obtained on the expectant plan of treatment. Do not misunderstand me. I do not oppose the knife; I favor it in proper cases. I oppose such ideas as have been advanced by Dr. Hurd in the Detroit Medical Age of June 25, 1893, "That the moment that the diagnosis of appendicitis has been made is the time to operate." "Operations are the most successful that are performed within twenty-four hours of the onset of attack." Such teachings are at variance with results obtained in the general practice and with the experience of many of our best surgeons. Where the presence of pus can be proven beyond question it is not safe to delay, although, as shown in my own cases, spontaneous cure may even then take place. "*Ubi pus, ibi incisio,*" holds good here, as well as elsewhere. If there *is* pus, evacuate it; but simply because we *suspect* the presence of pus, or because we have an inflammatory process going on in the region of the appendix, in which we fear the formation of pus, is no positive reason for the use of the knife. Give nature, aided by proper medicinal means, a chance, and many of the cases will recover. If there should be any doubt as to the presence of pus, the long hypodermic needle or the small aspirator needle can be safely used to determine the matter. If pus is present and the patient refuses to allow the knife to be used, the pus should be removed and the cavity washed out by means of a large-sized aspirator needle. It is surprising how much relief often follows the use of the aspirator even when only a small amount of pus, or even exudate, is removed, or how rapidly resolution often follows this treatment.

The literature of the present day certainly teaches very forcibly the idea just advanced. Dr. Bigelow, in a collection of ninety cases, where 71 per cent. were operated upon, shows only 65 per

cent. of recoveries, while in the remaining 29 per cent. of the cases, which would not submit to an operation, 75 per cent. recovered. This result speaks loudly in favor of non-interference. In this paper I report eight cases with only one operation, and in a paper read by Dr. McDonald, of Jackson, Tenn., at a meeting of the West Tennessee Medical and Surgical Association, five cases are reported, thirteen in all. Only two cases of the thirteen were operated upon; both recovered. Of the remaining eleven cases, one died, three discharged the pus which had formed *per rectum*, and one *per vaginam*, and in six of the cases resolution took place. Thus, only 20 per cent. of the cases demanded an operation.

Dr. Bull formerly taught that nearly all cases of appendicitis demanded an operation, but he now holds that the use of the knife can be avoided in fully one half of the cases.

Dr. Ball is strongly of the opinion that the great majority of cases of appendicitis begin to improve within the first twenty-four hours, and that such should be treated on the expectant plan.

Roux, of Lausanne, advises an operation only when suppuration can be diagnosed.

McBurney depends upon the early detection of the signs of suppuration.

Revelliod, after treating seventy cases, advises early medicinal treatment. "When in doubt, do not operate."

Kottman advises medicinal treatment.

Kocher advises an operation only in case of a second attack.

Jalaguier advises the trial of vigorous medical treatment, opium internally and ice externally.

Lange holds that it is not necessary to operate.

Others take opposite views. I find in the current literature a report of 212 cases treated surgically. Of these 190 recovered and 22 died; the mortality being a little less than 11 per cent.

Again, in 92 cases treated medicinally alone the number of deaths was 8, recoveries, 84, the mortality being a little less than 9 per cent.

To sum it all up, a patient with appendicitis is in a dangerous condition, but *before* the formation of pus, *before* ulceration or perforation has taken place, or the appendix has become gangrenous, or has sloughed, the danger lies in the future.

During this period, we are warranted in resorting to medicinal measures alone, and these measures should be active, vigorous ones. I would advise the use of morphine hypodermatically only in such quantities as may be necessary for the relief of pain; a mustard plaster should be applied over the seat of the pain, and this should be followed by hot turpentine stupes, and these by the hot water bottle. I am aware that ice is recommended as a local application, but I prefer the hot ones. Sulphate of magnesia should be given in half-ounce doses, repeated every two hours till free and full evacuations are obtained and the bowel is completely emptied. Nor should the physician content himself with the report of the nurse in regard to the discharges from the bowel. He should see himself that the desired result has been obtained.

In cases of catarrhal appendicitis these measures will usually succeed. Resolution will speedily take place. We must remember that the sulphate of magnesia acts not alone as a purgative but as a local depletant. By its action the blood-vessels of the cecum and adjacent parts are unloaded and resolution much aided. Should these measures fail to give prompt relief, the aid of the surgeon's knife is to be invoked. Of course, should the attack be due to an enterolith or any other body dropping into the appendix the probabilities are very strongly in favor of the knife.

I have presented this paper, which sets forth only my individual views, in order that a discussion of the subject may be invited.

APPENDICITIS FROM A MEDICAL STANDPOINT.*

BY DR. T. L. M'DERMOTT.
LOUISVILLE, KY.

The unfinished report of Dr. Cartledge on the classification of appendicitis, which was interrupted at our last meeting, and the exhibition of specimens of some late operations suggested some comments on the subject from a medical standpoint. It was, therefore, made the special order for this meeting, and as I feel no more important question is agitating the public expectancy, both here and abroad, than this, I invoke by this method the local

* For discussion see page 434.

sentiment, favorable or otherwise, as to its advisability and the character of cases deserving its application.

In this, as in many other of those heroic operations that enkindle the enthusiasm of the original promoters and startle the laity with the wonders of a science that thrills even the initiated, snatching from Death the innocent victim and restoring to health the misanthropic cripple, it certainly seems inexpedient for the unsurgical brother to dampen the ardor or quench the fire that illumes such desolate pathways. But, on the other hand, as license runs wild with its sensuous victories and culprits stalk where angels fear to tread, the history of all these grand successes is blotted frequently by unrestrained excesses and the brilliant progress of the art destroyed by the unwary and the charlatan; and it does become at times the duty of the peaceful practitioner, standing apart as it were from the conflict between the knife and dissolution, to stay the hand grown riotous by acclamations.

Not that I expect to say any thing new on the subject, worn threadbare possibly already, but simply to bring to a more vivid experience its faults and triumphs as demonstrated at home. The unalterable fact obtains, however, that a growing sentiment is fast gaining assertion among the medical members of the brotherhood, who formerly, after diagnosis, relinquished without question their subjects to the knife, and contrawise among many of the adroit surgeons themselves there is already a disposition to eliminate many of their former operable cases.

Only a few years ago it became an open boast that laparotomy was, in skillful hands, a decidedly safe operation, so entirely harmless that it took rank among exploratory procedures, and it was growing as common to cut open the belly to elicit or confirm a diagnosis as to perform many of the minor operations, so much so that in many instances life was sacrificed in the useless search for supposed disease in healthy organs. Nor do I wish to affirm right here that the quest was uncalled for nor blight the fame achieved in some of those undertakings, but I *do* assume that in many instances the gravest concern must follow imprudent proceedings.

The most serious obstacle to the fullest enlightenment naturally occurs from the want of frankness that interposes an almost

insuperable barrier to a quick and decided solution of its utility in the ranks of the profession itself; and for many reasons primarily the experimentation, which naturally opens so many new fields of conquest in surgical enterprise, only prove their availability by continuous research, and they traverse many tortuous courses before the danger signal calls a halt.

Secondarily, I presume the implied acquiescence of doubtful results and the frequently unquestioned exhibition of specimens that do not fully bear out the alarming aspect the operator would have us affirm.

I have no doubt that many lacerated appendices could trace their origin to the inevitable rudeness that attended their separation and seem to give credence to urgency that calmer retrospection would deny. Of course the gravity of the responsibility where fatal results attend these operations militates strongly toward the defense of measures attended by such fateful consequences, and whether the operation were wise or incompetent a fellow feeling for the author would bias an untoward criticism of his work.

As I intend this introduction to the discussion of the evening as a prelude to more statistical facts in its elaboration, I shall not enter fully into the etiology (which is somewhat obscure), nor to the technique (which belongs properly to the surgeon), nor the diagnosis (which is the property of both), nor the pathology (which is the rock that divides the limpid stream of life, and the election of either channel after its passage, whether it be medical or surgical, decides in a large degree the fate of the eventful voyage). Of course the supreme comprehension of them all merges into the general field of treatment when the battle-gage is given and upon which depends the weal or woe of the subject.

To those painstaking, erudite, thoughtful, conscientious surgeons who bring to their task in these monumental trials the unimpeachable strength of purpose that wavers before no disaster, nor incriminates their courage, be the results what they may, always remembering a human life is in the balance and at the mercy of their prowess, I wish to bow in humble gratitude and sublime *devoir*. If there is any lofty pinnacle to which ambition towers and upon whose crest reposes its godliest hero, I believe the crown is theirs. In silent chamber and with bated breath the

hovering circle waits his wondrous coming, and the canticle of joy or the deep-toned requiem his departure.

Is it wonderful, then, that we should pause in contemplating the risks and adventures that environ every step or stop in this debatable territory? In this connection it is interesting to note that Talamon of Paris, Guttman of Berlin, and Treves of London affirm that from 85 to 90 per cent. of patients suffering from appendicitis recover spontaneously without the use of the knife, and Maurin and Hektoen, through many hundred autopsies, demonstrate the fact that from 16 to 30 per cent. of peri-appendicular adhesions, some even where perforation itself had occurred, were found with no antecedent history that betokened their existence. With this fact staring us in the face it becomes a mooted question whether the late-day recognition that appendicitis is the cause of 95 per cent. of diseases invading this territory, in the opinion of many demanding operation for relief, has been a blessing or a curse to humanity.

As regards its etiology much commendation can be taken from the assurance that feces, calcium salts, etc., are the concretions met with, rarely seeds or foreign bodies, so that we can return with renewed enjoyment to the small fruits of early life when we devoured baskets-full without consequences.

The diagnosis, coupled with its subsequent prognosis, is, I take it, the foundation stone of the whole fabric, mysterious, as it must be, in an affection which may be acute or chronic, continuous or relapsing, with great variation of often indefinite symptoms comparable to typhoid, peritonitis, strangulation, typhlitis, and others. Pain, the most prominent of all, is frequently referable to other regions, though in males, and I have not seen it mentioned, is mostly located in the testes and of great intensity. It may be absent—although the most prominent symptom—the temperature is vexing, tympanites and vomiting are variable in their appearance and conflicting, acute indigestion and nephritic colic are most confounding, the pelvic derangements lend no small assistance to the general confusion, to the practiced eye the semi-shock in the acute and the peculiar malaise in the chronic cases accentuate its intuition.

As I said before, the condition of the viscera and appendix furnish food for controversy even after removal.

As regards treatment, whether it shall be medical or surgical, brings the issue for yourselves to decide.

There is no question the literature of this subject has changed rapidly during the past few years to more conservatism in the use of the knife, and personally and from individual experience I have not found the relief from appendisectomy that is claimed or I had expected. Without citation of individual cases the results have been far from gratifying, nor do I believe the death-rate as light as reports would make us believe.

I present here an extract from one of the daily journals of last week, which probably escaped the notice of even the majority of the profession, bearing mute but inglorious witness to the prevalence of its abuse.

VICTIM OF EXPERIMENT.

DEATH OF NORMAN MUNRO, THE NEW YORK PUBLISHER—SUBMITTED TO AN OPERATION FOR APPENDICITIS WHEN IT WAS UNNECESSARY.

NEW YORK, February 24.—Norman Munro, the yachtsman and publisher, died at 6:15 o'clock to-night at the Hoffman House. The cause of death was heart failure.

Mr. Munro had undergone an operation for appendicitis, but it was afterward found that the patient was not suffering from the disease and that the operation was not necessary.

Henry, Mr. Munro's eleven-year-old son, who attended a private school at Dobbs' Ferry, had his vermiform appendix removed by Dr. Abbe on Sunday last. The boy had complained of a pain in his right side immediately after coasting. He is convalescent now.

HAD THE SYMPTOMS.

Mr. Munro complained of a soreness in the right side early in the week, and suspected that he had appendicitis. Under ordinary circumstances he would not have given the matter much thought, but his symptoms being similar to those of his son led him to believe that he was suffering from the same disease. Mr. Munro became interested in the subject of appendicitis, and decided to have the appendix removed. The patient was put under the influence of ether on Friday and the operation was performed.

No foreign substance was found in the appendix of the parent or in that of the son. There was only a gangrenous inflammation of the appendix. Mr. Munro recovered from the effects of the ether and conversed with his physicians half an hour after the operation.

He seemed confident that he would pull through just as his son had done. During the night and early morning his condition grew rapidly worse. At 2 o'clock in the afternoon Dr. Abbe said the end was looked for any moment. His family was present when he died.

A "Victim of Experiment" were the flashing headlines in large type that chronicled the catastrophe, although the operation, it appears, was performed by Dr. Abbe, one of the leading men in our ranks.

The discussion of this interesting subject can not fail of the most salutary effect at all events, and for the sake of that great medical enlightenment that is making our age more brilliant and progressive than any of its predecessors, I hope it will continue until the veil is lifted from its present obscurity, and the refulgence of its promise becomes brighter for the ordeal it has endured.

INTESTINAL ANASTOMOSIS.*

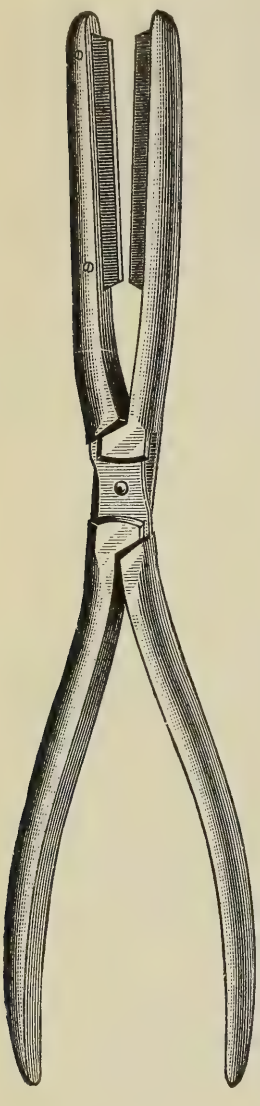
BY H. HORACE GRANT, M. D.
LOUISVILLE.

[Published exclusively in MATHEWS' MEDICAL QUARTERLY.]

It is fair to say that the method of making intestinal anastomoses by the bone and rawhide plates, the rings of catgut and rubber, potato plates, etc., has been abandoned by the profession and almost given up by the originators of the various methods. The opening thus made is too small for serviceable lateral anastomosis, though still much larger than that made by the Murphy button, and the bulk required to make suitable fenestra in the bowel is unwieldy and unsafe. The surgeons who considered such aids have returned to direct suture or to the device suggested by Dr. J. B. Murphy, of Chicago. Of course the direct suture is the ideal method, but it is the most difficult to accomplish, and hence is out of the line of the surgeon unpracticed in intestinal work. You are all familiar with the methods of direct suture as employed by Abbe as well as with the end-to-end suture of Jobert and others. No surgeon not used to intestinal work can hope to do either in less than an hour of formidable work, with great risk also of soiling the peritoneum. The Murphy button, of which we have all heard so much, is utterly unfit for lateral intestinal anastomosis on account of the small opening it makes. While such opening may suffice for the few months of life left after operations for malignant disease, yet it will often close entirely

*Abstract of address, by invitation, to Missouri State Society at Lebanon, May 16, 1894.

and must *always* greatly contract, and is unsuitable after operations on gangrenous hernia, volvulus, intussusception, strictures of fibrous character, and other non-malignant obstructions. While this objection is less declared against end-to-end approximation, the patency of the opening thus made is not assured. Yet the second objection of a dangerous foreign body above the ileo-cecal valve applies to either method.



I can not allow myself to be misunderstood about this device. It is most ingenious and works admirably. It has a most serviceable purpose under many circumstances, but is very objectionable, as above stated, in non-malignant obstruction of the bowel. The method of direct suture is a crowning success if made easy of accomplishment. I show you a clamp which I described last year, then imperfect, to the Southern Surgical and Gynecological Society. The clamp opposes two blades, admitting full four inches introduction into the bowel. The blades are $\frac{5}{12}$ inch wide, each having a scissors knife set upright in center of opposing face about $\frac{3}{8}$ inch high and $2\frac{1}{2}$ inches long, the outer end of the knife terminating $\frac{1}{2}$ inch before the end of the blade is reached. Each blade has sharp pins not opposable, two thirds as high as the knife, set into the blade half way between the free edge and the upright knife. These pins penetrate a little way into the surface of the gut and prevent its slipping when cut through with the knife.

The clamp is used thus: When the resected portion of the intestine is removed the divided ends of the intestine are held parallel, one blade is entered in each, allowing at least one inch beyond the proposed cut to permit subsequent suture of the end. The clamp is then tightened, the opposed surfaces are cut through by the knife but held in apposition by the blades; they are then easily stitched together by a continuous overhand Lembert suture of fine silk. Access to the under side of the gut is readily got by turning out the blades from under the mesenteric apron. The

scissors action of the clamp and the ten to fifteen minutes pressure prevents hemorrhage. The clamp is now unlocked and each blade withdrawn separately. The finger is introduced to assure the opening is perfect. If there is any defect it is readily remedied by a small pair of scissors introduced into the opening. The ends are now invaginated in the usual way. If desired any auxiliary sutures may be put in after the clamp is withdrawn. If the anastomosis is made without resection, a small opening made in each intestine for introduction of the clamp makes but a few extra sutures afterward. One row of sutures is enough. Grafts of omentum or mesentery may be employed as the surgeon prefers. The convex surfaces of the bowel should be apposed to avoid the mesentery. With this clamp I have comfortably completed the stitching in eight minutes. I have made thirteen experimental operations with eleven successive recoveries. The opening is seen after a few weeks as oval and two full inches long. I look upon the clamp as being an aid to direct suture of great value in adding speed and safety to any operator, and as a means without which many a good general surgeon can not hope for much in lateral anastomosis.

Boido, Lawrence: Abnormal Appendix Vermiformis. (Read before the San Francisco Medico-Chirurgical Society.)

So much surgical work is being done to-day upon this part of the intestine that the following anomaly is worthy of notice. The subject, a native of Germany, had died, at the age of sixty-three, of phthisis. In dissecting the region of the cecum I found the appendix beginning by a funnel-shaped opening at its lower and posterior portion; thence running over the brim of the pelvis, and terminating in a *cul-de-sac*, which opened into the ileum about three and one half inches from the ileo-cecal valve.

Its appearance was smooth and bluish pink, about the size of a lead pencil, and measured six and one half inches in length. It readily admitted a good sized probe at its termination in the ileum which passed into the cecum. There was no evidence of previous inflammation, and its mucous membrane seemed to be continuous with that of the ileum.

Society Reports.

LOUISVILLE CLINICAL SOCIETY.*

Stated Meeting April 10, 1894.

GUAIACOL IN APPENDICITIS.

Dr. J. W. Irwin: On March 24th I was called to see girl fifteen years of age, and found her suffering from appendicitis. Her temperature was 104.5° F. She was complaining of rigors, etc., and had been all the day before; she could not be gotten warm; extremities cold, but her axillary temperature was 104.5° F., and she was suffering with severe pain in the right iliac fossa, on a line with the anterior superior spinous process of the ilium about four inches toward the median line. There was one spot of tenderness at the point I have indicated, and I diagnosticated appendicitis. The next day there was a well-defined tumor about three inches in length and one and a quarter inches in diameter, extending upward and outward in the region indicated. The patient had received the day before I saw her (she had been sick twenty-four hours when I was called) two grains of calomel administered by the mother, and that had been followed a few hours later by a dose of castor oil. Very free purging followed the use of the castor oil, much more than the mother had anticipated. The evacuations were watery and very offensive, and contained nothing but fecal matter, which had a peculiar odor very much like that of the evacuations in the latter stages of summer diarrhea in children. The limbs could be straightened, and she could lie flat on the bed without causing any increase of pain. Turning in bed increased the suffering, to the left very materially, to the right it eased the pain. I felt certain that the trouble was appendicitis on my first visit. I administered paregoric and saw her again six hours later. Temperature was still high in the axilla, and the nurse could not get her warm.

I had used guaiacol in typhoid fever, in three cases, applied over the iliac region, and thought I would make use of it in this

*Stenographically reported for MATHEWS' MEDICAL QUARTERLY by C. C. Mapes.

case to see what effect it would have on the inflammatory process. I directed that fifteen drops of guaiacol should be painted over the seat of the disease, applying it over an area about the size of the palm; cotton was applied over this and held in place with a binder. An hour or so later the temperature had fallen one degree. Whether it was from the effect of the guaiacol or a normal defervescence I was unable to determine. During the night her temperature ranged about 103°, and in the morning it was 104° F. I then applied twenty drops of guaiacol over the same area, without previous washings and dressings as before. Two hours later the temperature had fallen to 99° F. and the patient was asleep. Her mother remarked to me then: "Doctor, can't I use that application oftener; soon after it was applied it relieved the pain and she fell asleep." Of course this relief may have been due to the paregoric and not to guaiacol. Anyway, as the temperature was reduced the patient became very much more comfortable. The application of twenty drops of guaiacol in the morning at nine o'clock controlled the temperature until seven in the evening, when it rose to 103.5° F. Another application of of guaiacol kept her comfortable through the entire night and following morning until twelve o'clock. Meantime her temperature ranged between 99° and 103°. Two applications of guaiacol a day controlled the temperature, made her comfortable and relieved the pain. A dram-dose of paregoric was given at night to enable her to rest, as she was somewhat nervous. There was no sweating under the use of guaiacol, or after the reduction of the temperature; the skin remained dry.

This is the seventeenth day of her illness, and there has been no elevation of temperature since the thirteenth day. The tumor has decreased in size; the tenderness has diminished under the local application of guaiacol. Paregoric, an occasional enema, and some salicylate of quinine were the internal remedies. This, with rest and a very strict liquid diet, was the treatment. I think the patient will now get well without the formation of an an abscess.

I saw another case this morning in a gentleman seventy years of age. The attack is not very severe; he has been sick three days. Indications at first pointed to disease in the right iliac region, and there was considerable distension of the colon, but

no tumor could be discovered. There was some little doubt as to the nature of the trouble, and he was thoroughly purged with castor oil in the beginning of the attack. His temperature was 101° F. at night, and from 99.5° F. to 100° F. in the morning; pain not very severe. This morning I saw the case for the first time; there was a large sausage-like tumor in the right iliac fossa extending from the anterior superior spinous process of the ilium down in the direction of Poupart's ligament; tender under pressure. The colon was distended with gas, but there was no tenderness in the region of the cecum which we sometimes find in appendicitis. This case was diagnosticated appendicitis, and as the gentleman is quite old, with a feeble constitution, the probabilities are that an abscess will form, and the surgeon will be called in, and the usual operation and autopsy will follow.

We did not apply guaiacol in this case because the temperature was not high enough to demand it, but gave him codea (one half grain) to relieve pain and cause sleep. What the outcome of the case will be of course I do not know, nor do I know that surgical interference will be necessary. We will try to bring about a cure without resorting to surgical measures.

I have looked up the history of appendicitis recently with especial reference to the mortality in cases operated upon and those treated by the medical plan alone, and so far the result in the treatment of appendicitis medicinally is much more successful than where the operation has been resorted to. However, in many cases it is probable surgery has not had a fair test. I have no doubt if many cases had been operated upon earlier they would have gotten well. In the extreme stage of the disease, after general peritonitis has supervened, recovery is not so likely to follow, therefore the surgeon hardly has had what may be called a fair chance. The mortality after operations in appendicitis, as far as I have been able to collect, is about 45 per cent., while the average mortality after medical treatment is 20 to 27 per cent. The difference, however, may be due to the fact that the surgeon usually receives none but the worst cases to operate upon. In the last twenty years I have treated at least forty cases of appendicitis—two cases a year would be a very conservative estimate. I have not had a death to occur from this cause. I have had to open abscesses, and I have had abscesses to burst

in various directions, and some of my patients are permanently crippled. While after the operation results have not been all we would like to see, yet, when considered from every point of view, the operation must be regarded as the most rational method of treating appendicitis. The physician stands over these cases in great suspense, as he does not know at what minute perforation may take place and infiltration of the peritoneal cavity may cause general peritonitis and death. If this does not occur, he has to look forward to a recurrence of the disease, especially in the young. I am of the opinion that the time is not far distant when we will be able to reach such a point that the disease will be recognized early, the operation consented to at once, and prompt relief and cure will be obtained.

While I have not the statistics of appendicitis clearly in my mind, I believe males are much more subject to the disease than females, in the proportion of 100 to 16. The ages at which it is most likely to occur are between twelve and thirty-five. It may occur in earlier life, and on the other hand it sometimes attacks older people, as in the case I have just reported. So when I look at these cases in their different aspects, while I am inclined to be conservative, and my experience leads me to make this statement, not simply looking at cases from the standpoint of saving life alone, yet I am in favor of early operative procedures, as I believe surgery will give better results than any other method of treatment. While the patient may get well without the operation, we can not say that the disease will not occur again, and knowing this while he is strong, and no damage has been done to adjacent parts, the operation can hardly be any more fatal than exploratory incisions.

LOUISVILLE MEDICO-CHIRURGICAL SOCIETY.*

Stated Meeting, March 9, 1894, Dr. T. S. Bullock, Vice-President, in the chair.

DISCUSSION OF DR. M'DERMOTT'S PAPER.

Dr. A. M. Vance: I agree with Dr. McDermott that appendicitis is one of the most interesting subjects before the medical and surgical world at the present time. The question arises in each case whether it is a case for the physician or surgeon, and I must say at the beginning that I think one of the greatest faults in the outcome of a great many of these cases is that the doctor does not call the surgeon sufficiently early. I have operated for appendicitis ten times and lost four patients. Of the four patients that died, two were the subjects of general peritonitis and were practically moribund before the operation was performed. In one case the first symptoms had appeared about eighteen hours before, the other about three days. I believe if both had been operated upon at the very onset they would both have been saved. Of the other two cases, one was in active sepsis at the time of the operation; Dr. Bailey and several of the other members present witnessed the operation. The man died from sepsis without paresis of the bowel, that we nearly always see, because the bowels moved freely and there was no tympanites at any time. I believe firmly that, unless a case of supposed appendicitis is practically well in twenty-four hours from the first symptom that attracts attention, an operation should be performed. It is my opinion that this will be the treatment hereafter. Surgical statistics are positive, while statistics from a medical standpoint are of no value whatever, because the ordinary medical man (without operation) can not tell absolutely whether his patient had appendicitis or not. In proof of that fact Richardson has gone over the death statistics of Boston, Cambridge, and various other cities in that section, and the facts show that the death-rate in adult males from *peritonitis* in the last decade has been very great. What else in the young male can produce peritonitis except appendicitis, excluding traumatism? I am appointed to write a

*Stenographically reported for MATHEWS' MEDICAL QUARTERLY by C. C. Mapes.

paper upon the "Determination for Operation in Appendicitis" for the next meeting of the State (Kentucky) Medical Society, and I believe the whole subject can be covered in one line—"Diagnosis, then operation."

Dr. Wm. Bailey: I do not feel that I can do the subject under discussion justice; in fact I do not know that I have any very thorough convictions about it. There is great difficulty in making the diagnosis of appendicitis. I am not sure about the many cases claimed as having been cured by the physician really have been appendicitis. There is great difficulty sometimes in differentiating appendicitis from what we used to call typhlitis and perityphlitis; those cases in which the appendix is not involved. I believe that a large number of them get well even under the care of the ordinary physician. But cases of undoubted appendicitis, I am in doubt whether they ever recover without surgical procedure, and I think the greatest difficulty is in making that differential diagnosis. Great stress is laid upon the McBurney point, a prominence midway between the anterior superior spinous process of the ilium and the umbilicus—it is evident at first sight that this can not avail because of displacement of the appendix. There can not be a stated point of prominence if, as has been proven by operations, the appendix is displaced, and I doubt if, the appendix being behind or external to the cecum, there would be a point of prominence. There is, however, one important diagnostic point that occurs to me, and that is tension of the muscle on that side even before a tumor can be recognized or there is any marked tenderness. I do not believe that we can recognize a tumor as soon as an operation ought to be performed. I do not think we ought necessarily to wait for a tumor. I think the impression made by perforation would be manifested by the impression made on the pulse. Now in the case Dr. Vance speaks of the heart was decidedly impressed, and, while the operation was well and quickly performed, I do not think recovery could have been possible under any circumstances. There was a large abscess from which very offensive pus was removed, and the man was evidently under the influence of sepsis before the operation. He did not die from the operation or its effect. I doubt if he died as soon as he would have done if the operation had not been performed. The patient was sick only three days; the surgeon

was called on Friday, operated on Saturday, and the boy died twenty-four hours afterward. The heart could not be maintained, the usual measures made no impression upon it whatsoever. Of course we have all seen cases of so-called typhlitis, accumulation of fecal matter in the cecum, etc., give rise to symptoms similar to those manifest in appendicitis, the tumor may even be more marked than in an ordinary case of appendicitis, and I think the great difficulty is in the physician determining whether it is appendicitis or not; I would make it largely a question as to surgical interference whether or not we can demonstrate that it is a case of appendicitis. I have seen a number of cases of so-called appendicitis—I regarded them as such—recover under medical treatment. In my observation of thirty or thirty-five years, in my own practice, I have never had occasion to resort to surgical measures in the treatment of so-called appendicitis, and have never had a case die. Perhaps they were simply cases involving the cecum, yet local peritonitis developed in some cases. Frequently I have seen marked tumor in the appendicular region with constitutional impression, elevation of temperature, quickened pulse, tenderness on pressure and rigidity of the muscle, etc. Yet I do not know whether they were appendicitis or not.

Dr. J. G. Cecil: I have no very pronounced opinion in regard to appendicitis, because my individual experience in that direction is very limited. Like my friend Prof. Bailey, I have never seen a case in my own practice that I can say positively was appendicitis. Those cases that I thought were appendicitis have recovered without operation. In the cases that I have seen operation has not been indicated; the cases that I had every reason to believe were appendicitis have gotten well without it. However, I recognize the fact, which is established beyond any reasonable doubt, that many of these cases do necessarily require an operation to save them. Any opinion of a given case that I might have would, of course, be based upon the diagnosis of the case; my judgment as to operation would depend upon the diagnosis, and I am prepared to say, if I were called to see a case of supposed appendicitis and could make out from the symptoms and history of the case that suppuration or perforation had occurred, I would not hesitate a moment in advising an operation. Until this feature could be substantiated I should be inclined to hesitate.

I do not believe that every case of *supposed appendicitis* requires operation at once. It all depends upon the diagnosis. If a case of suppurative appendicitis is established beyond question, then an operation is demanded, but neither the surgeon nor the physician to my mind has yet given us a schedule of diagnostic points that will enable us to say one way or the other just what is the proper procedure. Notwithstanding the very pronounced and decided views taken by both sides I am still "on the fence."

Dr. J. L. Howard: I certainly think that appendicitis is a surgical disease so soon as the diagnosis is made, and should be operated upon without further delay. I have been unfortunate enough in the last year to have had two cases of appendicitis, one operated upon the other not. The first case was a young man whom several of the Fellows will doubtless remember. He was taken on Wednesday with pain in the right iliac region; there was no tumor; the pulse was not accelerated, and the temperature, up to the time collapse came on, did not exceed 101° F. The next morning (Thursday) I made diagnosis of appendicitis; I did not pay any attention to McBurney's point, because I do not see how we can expect to have any defined point in an organ as large as the cecum when it varies so much in shape from distension, etc. The diagnosis I made was catarrhal appendicitis, which I shall always regret, because I think it is very misleading and we should not classify appendicitis as catarrhal. It does not matter what the nature of the inflammation in appendicitis is, it should be operated upon. I called in a surgeon immediately, who agreed with me in the diagnosis, but as the patient had a pulse of 74 and was getting along so nicely he advised waiting a day or two before operating. The case went on until Saturday night, when suddenly symptoms of general peritonitis set in, perforation evidently having taken place. Owing to the time of night I was unable to get a surgeon immediately, and operation was not performed until the next day. The patient was in collapse at the time, and right there is an important point. If I were a surgeon I would never operate upon a patient in collapse. The operation was quickly completed, and the patient died a short time afterward.

The other case had a similar history, and *post-mortem* showed about the same condition. In both cases the appendix was almost entirely destroyed. In the last case it was very hard to find the

appendix, only a small portion of it being left, and the cavity was filled with pus.

Dr. Turner Anderson: I have expressed myself so often upon this subject before this Society that I really feel I have little to add to what I have already said on the many occasions when we have discussed the question of appendicitis. I can only talk about my own experience, what I have seen, etc., and perhaps there will be little interest attached to it. I can say now, as I have on a great many occasions, that the reports and specimens that have been presented at different times in regard to appendicitis have not changed my views in regard to this trouble.

The first case of appendicitis I saw was in 1866; it was then called perityphlitis; that man is alive and well to-day. The name "appendicitis" was not known at that time, the nomenclature has been changed since. From that time to the present I will say that I have never seen a case not operated upon which terminated in abscess or in death. Within four months of the present time I saw a little girl ill with abdominal pain, having a tumor as large as a man's fist immediately beneath the McBurney point, that went on with dysenteric symptoms until it looked very much like the case was one in which an abscess had formed and that operation would be nothing more than opening the abscess. Dr. W. O. Roberts saw the case with me. The child's pulse was good; inspection of the abdomen showed the tumor—it was not necessary to palpate as it could be plainly seen. We concluded to wait until the next day, and the day following we waited again. There was a sudden subsidence of the pain and discomfort, the tumor entirely disappeared, and the little girl made a perfect recovery. Her temperature on several occasions was 103° F.

Nine months ago I was asked to see a case with Dr. Roberts, a little Jewish child. The patient was lying in bed with the leg flexed and all the evidences of perityphlitic abscess; tumor quite large. The mother strenuously objected to any operative procedure, and I told her that I believed the child would get well if let alone. I was not sent for in consultation at request of Dr. Roberts, but was asked by the people. I believed that the child would get well and would not force the operation. That child is running about now, going to school.

From 1866, when I saw my first case, up to the present time

I have not seen a case that has terminated in suppuration nor terminated in death which was not operated upon. That is a queer personal experience. I do not mean to criticise the surgeons on the subject nor their operative procedures, I simply state facts.

Some months ago I thought Dr. Cartledge had advanced views which were entitled to most important consideration; he suggested that the appendix was an organ which had some special way, when attacked with catarrhal inflammation, of getting rid of that inflammation by discharging into the cecum—some special way which was not understood. I thought it might be possible for the appendix to fill up with a semi-liquid material and form a tumor without closing the proximal extremity of it; I thought there might be something in what Dr. Cartledge said, and the course he suggested might be pursued which would explain recovery of some of the cases treated medically. I was very much surprised at the last meeting of this Society when Dr. Cartledge, without prefacing any thing he had previously said on the subject, exhibited a specimen of an appendix he had removed, the man having presented symptoms of recurrent appendicitis, calling attention to stenosis of the proximal extremity of it. I could not see any thing the matter with it. I could not see any thing abnormal about it simply from an ocular inspection. There had been no perforation of that specimen. So that my idea is that it was a case of catarrhal appendicitis where the tumor had discharged into the cecum, the accumulation having been gotten rid of in that way. Though Dr. Cartledge declared there was no such thing as "catarrhal appendicitis," he presented an appendix which, so far as I could see, had nothing the matter with it. It shows how difficult it is for us to arrive at a satisfactory classification or to intelligently discuss this subject from a pathological standpoint. Therefore discussion of the subject from a clinical standpoint at the present time is the only standpoint from which we can get any special information. I believe if I were called upon to demonstrate whether an operation should be performed for appendicitis in an individual I had a great deal of interest in I would decide in the negative. I have seen a great many cases of appendicitis; have been present at the operation; have seen the appendix removed, and have not seen positive evidence of

disease nor sufficient evidence in my judgment to justify operation. And, as I say, I have not seen a case terminate fatally which was not subjected to operation.

There is one case to which I want to call attention, without mentioning any names, where I think a man would have had better chances of life if he had not been operated upon. He was a beer drinker, obese, flabby, had a weak heart, a depressed nervous system, and perhaps kidney trouble in addition. I think that man would have stood a much better chance to have gotten well if he had been let alone. He died soon after the operation, and, so far as I am able to offer an opinion, there was nothing in the appendix that could have caused the symptoms under which he was laboring at the time of operation. I believe that operations for appendicitis are being performed too frequently, that there is entirely too much being done in this line. This thing of talking about recurrent attacks of appendicitis and operation to prevent the dangers that may come I think is a grave mistake, and believe it is a great deal better to trust to our old methods of treatment in these cases than it is to open the belly upon the slightest evidence of pain or distension. There are a great many people who suffer from constipation, indigestion, flatulency, etc., which might cause the same amount of pain and tenderness, and I believe that many mistakes are made when the belly is opened. It is a very difficult question, as the essayist has said, to determine what the condition is. I believe in a great many cases those conditions which were supposed to have been the cause of the disease are largely *post-mortem.*

Dr. E. R. Palmer: I would like to ask Dr. Vance the final outcome of the case (Mr. W.) he operated upon some time ago for appendicitis?

Dr. Vance: The history of that case was that the man had suffered several attacks of severe pain, and every thing pointed to appendicitis. At the operation, from a macroscopical examination of the appendix I did not think it was diseased, but the microscope revealed that it was in a state of active inflammation. The man has had a similar seizure since the operation, and there must, of course, be something outside of the appendix as a causative agent. He is a very nervous, hysterical man.

Dr. A. M. Cartledge: Did Dr. Anderson take the trouble to

examine two other specimens I exhibited at the last meeting of this Society, he only mentions one? If he had examined the other specimens he would have observed a pathological condition certainly demanding operation. One was a large perforated appendix and the other a necrotic stump of appendix with fecal matter pouring into the surrounding abscess.

Dr. Anderson: I think those specimens were undergoing a form of resolution which may be common in tumor cases. Very recently I was asked to see a woman where I believe such a condition existed.

Dr. Vance: Did not Dr. Anderson see pus in the belly of a case of appendicitis upon which I operated in his presence some time ago?

Dr. Anderson: I do not remember to have seen any pus; there may have been the remains of a hematocele, but I believe the appendix was in a healthy condition. I did not examine the specimen Dr. Cartledge presented with a great deal of care, but I could see no pus or any thing else to indicate disease. I do not know whether rupture had occurred or not, or whether there had been an inflammatory exudate outside which had marked the effusion of pus. I asked him where the morbific evidences were, and he said I would have to take his statement that the appendix had contained liquid feces, etc. I told him that I would accept the fact that it was a case of appendicitis, and asked him to point out the point of stenosis which was supposed to be near the proximal extremity. He made the attempt, but I was unable to see any thing wrong with it.

Dr. Howard: How many cases has Dr. Anderson seen in which he has noted the formation of pus, or an abscess causing general peritonitis?

Dr. Anderson: I have never seen a case terminating in suppuration or death.

Dr. C. Skinner: I do not know just where I do stand on this subject. It strikes me, though, that since the matter has been brought up it has about resolved itself into a factional discussion. I am going to claim to belong to both sides. Some of you know that I do sometimes work in this line, and also practice medicine. It would be a very hard matter to reconcile the statements made by the different speakers; but when we hear the statement from

such men as Drs. Bailey and Anderson, who have been thirty-five and twenty-eight years respectively in active practice, that operation in the majority of these cases is not required, it would seem that their views are entitled to mature consideration. I am going to bore you with the recitation of two cases, one operated upon followed by recovery, the other not operated upon and got well.

No. 1. The first case was a very thin woman, seen by me three years ago at the City Hospital. She was about thirty years of age, and one peculiar feature was that she had no teeth. She was suffering at the time from what appeared to be an undoubted attack of appendicitis. She was carefully watched by both myself and the interne. There was an exquisitely tender spot in the right side of the abdomen at about the McBurney point. In the first attack, under the application of cloths wrung from hot water to which had been added a little turpentine all tenderness disappeared. I kept her under observation for two months, and in this time she had three attacks of this sort, and I pronounced the trouble fermentative indigestion. The woman on account of the absence of teeth was not able to masticate her food at all. As stated, diagnosis had previously been made of appendicitis. This woman became apparently well, but I left her in the ward at the expiration of my term of service. I did not operate upon her. My successor took this patient out of the hospital (some repairs were being made and it was deemed wise not to operate in the hospital), and, removing her to one of the infirmaries, operated for appendicitis. I was not present at the operation and did not see the patient until several days afterward. From those who did see the operation I learned that the appendix was in a normal condition. Shortly after the operation, and before the stitches were removed, she had another attack of the same character and came very near dying. She finally recovered from the effects of the operation and went to Indiana. Last year, during my term of service at the City Hospital, this woman turned up again. She came into the ward and said that she had been having those attacks right along since the operation. I then secured for her a set of false teeth, and after several trials we succeeded in getting a set that would fit. Then arose the difficulty of getting her to properly masticate her food with the new teeth. I

practiced the lavage treatment of the stomach, and up to the time I left the ward no more attacks had occurred. In about a month absolutely all evidences of trouble ceased.

No. 2. In June I was called to see a young woman in this city who had always been the perfect picture of health, and another physician, her relative, had attended her for three days when I was called. She was taken ill very suddenly with intense pain in the right iliac region. At the time I saw her she had been given a cathartic, the bowels had moved freely, but there was no cessation of pain. The pain increased, and though the bowels were still open the temperature ran up, reaching 106° F., with a tumor in the right iliac region seemingly the size of two fists. I recognized the gravity of the case and called Dr. Bailey in consultation at once. I had already planned out a line of medical treatment, the use of opium and hot applications. This woman went along for two weeks under that treatment, making a good recovery, and is well now. Here was a case of unmistakable appendicitis which recovered under full doses of opium, keeping the patient sleeping nearly all the time, and the use of hot applications, changing these every thirty minutes. The tumor disappeared, and in two weeks she was up.

I hardly know where I stand on a question of this sort. I believe, though, where there are unmistakable signs of pus, or any evidences whatever of perforation, that operation is justifiable.

Dr. Cartledge: The more I study the subject of appendicitis the more I find there is to be known in connection with it. When I thought, five years ago, that I knew a great deal about appendicitis, I find that I knew very little about it; and I want to say, once for all, that my views on the disease, both as to pathology and treatment, time of operation and diagnosis, have been the subject of constant change. Even a year ago, had I been interrogated as to the nature of the trouble where a patient had recurrent attacks of pain and a lump in the right iliac region, with temperature of 101°, I would have said "catarrhal appendicitis," and advised against operative procedure, believing that the man would probably get well. If evidences of pus were present I would have waited until I thought there were anterior peritoneal adhesions to serve as a protection to the general peritoneal cavity,

then go ahead and open the abscess and drain it, removing the appendix. If asked the question what I would do in the perforative type where rupture had occurred primarily with the probabilities of pus in the abdomen, I would have answered just as I would at the present time, that operation is imperatively demanded at once. I now believe that all cases of appendicitis that can be so diagnosed without question should be operated upon. As you all know, I differ with the majority of surgeons in regard to the pathologic classification of this affection. Look at the discussion of the subject to-night, what a variable course it leads! Here is a gentleman who says, from what knowledge we have of the clinical manifestations and clinical history of these cases, that there is no material difference between appendicitis and the older terms of typhlitis, perityphlitis, etc., and further, makes the statement that there is no case of appendicitis that ought to be operated upon, that he would not advise operation in any case. If this does not call for some more definite classification of this disease, I can not conceive of any thing that would do so more than this discussion to-night.

To revert to the specimens shown at the last meeting of this Society: I selected three specimens, illustrating three types of the disease. My object in presenting the specimens was to try and throw some light on the pathology and classification of the disease. In the specimen Dr. Anderson has mentioned, which was a case operated upon the day of the meeting, there was a distinct stenosis about one half inch from the base, the result of cicatrization of former inflammation; there was a history of several attacks of undoubted appendicitis; the appendix was found coiled up behind the cecum and adherent, enormously distended with liquid fecal matter and pus. The appendix was slit open in order to show the stricture. It was a typical case of so-called catarrhal appendicitis, a condition which I claim can not be recognized and does not exist. I claim that all lesions in this situation sufficiently well-marked to be denominated appendicitis are primarily ulcerative or perforative in type. Those cases heretofore called catarrhal appendicitis I am confident were ulcerative in character, which led to stenosis at some portion of the lumen of the appendix. It was to illustrate this point particularly that I exhibited the specimen.

It seems that the point which has attracted the most attention in regard to the specimen presented was the pathological condition, and this is the very point that I regarded as being the most apparent. There was plainly stricture, the continued contraction of which will eventually lead to either one of two pathological terminations, complete stenosis with distal distension and rupture, or retention with infection and general septic inflammation of the appendix leading to necrosis and perforation. The case was operated upon before rupture had taken place, and the result shows the wisdom of such a procedure.

As to exploratory incisions being harmless: It is probable that they are not harmless, but by this means of confirming diagnoses we have been enabled to clear up a very wide field of surgery. Twenty-five years ago the greatest problem before the surgical world was the diagnosis of ovarian cysts, but matters are now so thoroughly understood that even the country practitioner is able to make the diagnosis without question. Since this is true of exploratory incision in ovarian tumors, I see no reason why the same rule should not be applied in appendicitis to the end that we may better understand the pathology. In our present understanding we know that occasionally other conditions present pathological features which can hardly be differentiated. I remember having operated upon what I thought to be a typical case of appendicitis, which proved to be tubal pregnancy. The sac and contents were removed and the lady has since made an easy recovery.

The question of hernia following appendisectomy has been mentioned. Of course we must admit that hernia is more common following any operation where the incision is made out of the median line, but I believe with the proper after-treatment this liability to hernia can be reduced to a minimum.

Dr. McDermott suggests that physicians ought to become more careful about advising operation for appendicitis. I heartily indorse this portion of his remarks, but the deduction he makes is entirely from the standpoint of observation. While a man's past experience is very valuable as a guide, still it should not be entirely convincing. The probabilities are that men to-day are operating for appendicitis who a year or two ago would have advised against it. I can not understand how a man can stand

up and say that operation for this disease is not advisable and should not be performed in any case, when he has seen the abdomen opened where the appendix has been found perforated and gangrenous and the cavity filled with pus.

There is nothing that will regulate the operation for appendicitis, time for operative interference, etc., except a better knowledge of the pathology of the affection. Treves and some others quoted to-night do not refuse to operate upon patients suffering with suppurative appendicitis, demonstrating very clearly that they recognize the necessity of surgical measures. The mistake I think that nearly all authorities make is, that they continue to classify the affection as "perforative," "ulcerative," and "catarrhal." As I have stated before, I fail to see how catarrhal conditions of the mucous membrane can produce symptoms which can be recognized in connection with the appendix, or by which the condition can be diagnosed. I claim that it is utterly impossible. Then the question might be asked, to what can we attribute such symptoms? I say that the specimen I exhibited at the last meeting of this Society fully demonstrates the fact of an ulcerative, inflammatory condition, resulting in stenosis and distal distension, and finally perforation and septic infection extending to the peritoneum and structures surrounding the appendix. From the anatomy of the appendix it will be apparent that a part of the cecal contents may be forced into it, and may again be discharged into the cecum. We know that fecal matter does not normally occupy the appendix, its contents being only a mucous secretion, and I take it when fecal matter is found it is *prima facie* evidence that the appendix or the door to its entrance is diseased. This is interesting in connection with the so-called cures of appendicitis by the administration of opium, etc. A man has an attack of what is diagnosed by the attending physician appendicitis; he is treated by the usual medical methods and recovers. Some time afterward he has another attack and consults another physician, and under similar treatment again recovers. Say he has six or seven such attacks and is seen by as many different physicians, each of whom records it as a cure without operation. Finally he has a more severe attack, perforation evidently takes place, the patient is referred to a surgeon, is operated upon and dies; of course the death is only recorded once,

and the case is recorded seven times as cured by medical treatment. Therefore statistics as quoted by our essayist under these conditions would seem to be of little practical value. I am not inclined to believe that undoubted appendicitis is ever cured except by operative treatment. The appendix may become distended, and if the stricture is not complete the contents may be discharged back into the cecum, but it does not necessarily follow that the patient is cured, for the probability of future trouble is very great.

Another point. Microscopical examinations have proven that a great many of these cases are tuberculous in character, and I claim that we have no right to leave tuberculous structures anywhere in the body, because the patient is thus subjected to great danger of general tuberculous infection. The same thing is true of pus, no matter in what organ or structure it may be discovered.

When statistics are quoted to us that 95 per cent. of the cases of appendicitis recover spontaneously, they are certainly the first, second, or third attacks, as I have indicated. In other words, it is the point of observation from which we look at them. While Dr. Anderson and the other speakers may have treated cases of undoubted appendicitis which recovered, and some of which may still apparently remain well, it is no sign that they may not yet develop a perforative attack and die. I believe that when the appendix is once diseased, where there is ulceration it will be followed by stenosis and the patient will be liable to subsequent attacks, any one of which may result fatally. Mortuary statistics usually show that such deaths result from peritonitis, while I believe the facts in the case would show that the patients died of appendicitis. There is no doubt in my mind that ninety-five out of every hundred cases of peritonitis in the male are the result of appendicitis.

One word in regard to the diagnosis. Rigidity in the right iliac region; localized pain, acute in character; elevation of temperature over 100° F., and vomiting are indicative of appendicitis ninety-eight times out of a hundred, and demand operative interference. In the other two per cent. the mistake is pardonable for the good done the ninety-eight.

Dr. Rodman: He who says that operation should never be performed for appendicitis is certainly wrong; on the other hand,

those who say that the great majority of these cases should be operated upon are as far from the truth. I am satisfied that the tendency in this country is to operate too much for this affection. I can not understand how any man can say that there will not be found cases of gangrenous appendices that ought to be operated upon, cases that can not be relieved in any other way. I believe the middle course is the safer. Further, I believe in the English practice of operating between attacks, as we find our patients in the best condition to withstand a laparotomy.

Stated Meeting, March 23, 1894, Dr. T. S. Bullock, Vice-President, in the chair.

CONTINUED DISCUSSION OF APPENDICITIS.

Dr. A. M. Cartledge: At a meeting of this Society four weeks ago I exhibited three appendices illustrating three stages of the pathology of appendicitis. The first was the result of an operation that day, the appendix showing a stenosis commencing about half an inch from the base, with the extremity very much enlarged and distended with liquid feces. I split open the appendix in order to demonstrate the point of narrowing which I thought was of considerable interest. Second, a necrosed stump where the appendix had almost entirely disappeared; and third, a large perforated appendix. It seems that the appendix which was slit open excited the most discussion, the others having apparently been overlooked. In view of the various opinions held by members of the Society, I think the suggestion made by Dr. Vance, that we exhibit before this meeting such appendices as we may have preserved in order to illustrate the pathological conditions, an excellent one. I have accordingly brought twelve specimens for examination, which were all I could get hold of to-day. There were two or three other appendices that I wished particularly to present, but they could not be located in my hasty search among other specimens. One very pretty specimen, showing volvulus of the appendix with rupture, was lost in removal.

I have very little to add to what I have already said on the subject; the specimens themselves illustrate the different pathological conditions, and by an examination I believe you will all

agree that all of them bear evidences of pathological conditions demanding operation. Perforation had occurred in nearly every case, as will be seen by the specimens, abscesses had formed in most of them, and pus was present in all except one; that was the case reported four weeks ago, where there was stenosis and distal distension. Many of the patients had been subject to recurrent attacks of undoubted appendicitis, a few were operated upon *in extremis*, others a few hours after the first symptoms developed. One case was treated several weeks for typhoid fever before diagnosis of appendicitis was made. In only one case, I believe, have I found fecal concretions, and have never encountered a foreign body in the appendix.

Dr. Turner Anderson: What has been your per cent. of recoveries?

Dr. Cartledge: I have had twenty-two cases of appendicitis up to the present time, with four deaths. This number includes cases of general septic peritonitis, the result of appendiceal disease.

Dr. T. L. McDermott: Of the twelve cases represented by the specimens before us, how many died?

Dr. Cartledge: Three died out of the twelve.

Dr. A. M. Vance: I have here eighteen appendices, part of which were removed by myself, the balance by Dr. W. C. Dugan. I will not take time to refer to the cases in detail with the exception of one or two. The specimens all bear evidence of a pathological condition demanding operation, and this I think will be apparent by even a casual examination.

In the discussion two weeks ago the question was asked as to how many cases of appendicitis had probably been treated by the different medical men in which the diagnosis was never perfected, the patients died, and the deaths ascribed to *peritonitis*. Dr. Cartledge and myself in the last few days have looked over the Health Officer's statistics and death reports, and we have found recorded in the last twenty-three years 168 deaths in males from acute peritonitis, the average age being twenty-eight years. Almost every prominent physician of Louisville has his name affixed to some of these death certificates. We surgeons claim we have the right to believe that the vast majority of these cases of acute peritonitis (so-called idiopathic peritonitis) in the young

male, and a great proportion in females, are due to appendicitis, and I think this is a great argument in favor of surgical procedure in these cases. The physician does not know or can not be absolutely certain that he has a case of appendicitis until he sees the specimen, and the surgeon does not know positively. Certainly the specimens before us are diseased appendices, and they would have caused death in every case had not operation been performed.

Dr. Cartledge: In making the investigation spoken of by Dr. Vance, we excluded all cases of tubercular peritonitis; all cases of peritonitis in the female, and all cases where the peritonitis was said to have been the result of injury, and found, as has already been stated, 168 cases of acute peritonitis occurring in the male in the city of Louisville within the last twenty-three years, and the death certificate was so indorsed. From past experience it is our belief that a large majority of these cases were appendicitis.

Dr. McDermott: I think the matter is still *sub judice*, and in writing my paper, read before the last meeting of this Society, I did so purely in the spirit of research, hoping that it might result in our getting at the bottom of the whole matter and formulating something definite in the way of indications for operations, etc. The only solution of the problem, in my estimation, is to enter into just such discussion as we have been doing, to tabulate each case in which operation has and has not been done, and the result will be a better understanding of the situation. Possibly in that way we may be able to illuminate the field that is now certainly in darkness in the medical mind.

Adams, S. S., Washington: Dysentery in Children. (*Food.*)

If the pain and straining are intense, relief may be derived from the following:

℞ Cocain. muriat..... gr. ij;
Extract. ergot. aq..... gr. x;
Extract. opii aq..... gr. ij;
Aristol..... gr. v;
Olei theobrom ..... q. s.
M. Ft. suppos. No. x. Sig: One every two or three hours.

MATHEWS' MEDICAL QUARTERLY

"ALIS VOLAT PROPRIIS."

Vol. I. LOUISVILLE, JULY, 1894. No. 3.

JOSEPH M. MATHEWS, M. D., - - - - - EDITOR AND PROPRIETOR.
HENRY E. TULEY, M. D., - - - - - ASSOCIATE EDITOR AND MANAGER.

A Journal devoted to Diseases of the Rectum, Gastro-Intestinal Disease, and Rectal and Gastro-Intestinal Surgery.

Articles and letters for publication, books and articles for review, communications to the editors, and advertisements and subscriptions should be addressed to
Editors Mathews' Medical Quarterly, Box 434, Louisville, Ky.

THE AMERICAN DOCTOR.

In no country has medicine been scientifically advanced more in the last decade than in America. This statement is verified by the amount of original research, brilliant surgery, and painstaking literature accredited to American writers during the time named. Our works on surgery, practice, or any of the collateral branches have received the greatest praise on the continent of Europe.

Medical journals published and edited in this country are of equal merit to those published anywhere; while books devoted to special subjects are more abundant and better written than those on similar subjects by European authors. Time was when it was deemed necessary to go to Europe in order to complete or obtain a medical education; now, most any American college of medicine can show a number of Europeans on its list of matriculants. True, the course of instruction may not be as long; the study so rigorous, or the laboratory work so complete as in some parts of Europe, but for practical purposes the curriculum is just as perfect. Practitioners in the rural districts are just as proficient here as on the Continent, and American doctors who have attained to eminence receive just as much homage in Europe as distinguished Europeans receive commendation here.

One thing worthy of note is, that men do not now have to wait for gray hairs to make them honored or respected in the

profession, but talent alone tells the story, and in consequence many young men in America are in the front in scientific work, just as they are wont to be in Europe. The country is large and the opportunity great, and if a man can not succeed in medicine in this country the fault is his own.

SPECIALISM IN MEDICINE.

"We have received the first number of this new quarterly medical journal, which we are informed is the only journal of the kind published. It contains no less than one hundred and ninety pages of reading-matter, with nineteen original contributions from well-known surgeons in America. The printing and paper are of the usual Transatlantic excellence, and if forthcoming numbers are up to the standard of this one, it will reflect the highest credit upon editors and publisher. *In this country we can not quite understand the necessity of specializing to the extent now adopted in America.*"

The above is an extract from a very complimentary review of the QUARTERLY made by the editor of *The Bristol Medico-Chirurgical Journal.* The last clause quoted, viz., "In this country we can not quite understand the necessity of specializing to the extent now adopted in America," forms the basis for the caption of this editorial comment.

It is true that America is the home of specialism, just as it is the home of liberty and free speech. The main question that the paragraph italicized would indicate or suggest is, Is specialism in medicine a necessity? If this question can be answered in the affirmative, then it will be admitted that America is not only abreast but ahead of all competitive nations in the advancement of scientific achievements—medical. If answered in the negative, then we are engaging in a useless and unnecessary thing, and our attention had best be directed to other and more important means of benefiting the sick and afflicted. It is no uncommon thing for a London surgeon, or a physician on the Continent, to see and prescribe for any and all ailments of the body. Nor is it counted any thing singular for the so-called specialists to visit patients entirely outside their special line. Indeed these men are

specialists down town and practitioners of medicine and surgery when at their residences. It is no uncommon thing for a European oculist to busy himself during office hours with his special eye cases, and in the evening attend a woman in childbirth. Or some distinguished dermatologist will, after a morning's work in his office, amputate a leg, for a change, in the afternoon.

To the first proposition, is specialism necessary in medicine, it can be definitely answered in the affirmative. To illustrate: Before the day that Ephraim McDowell performed the first abdominal section for the removal of the ovaries it will be conceded that countless numbers of women had died because of the want of knowledge on the part of the profession in regard to the necessity of the operation. This point having been definitely settled, men in the profession set about to make themselves proficient in this kind of surgical work. In other words, to become *specially* trained as abdominal operators. The task is a long, tedious, and particular one. Much time, money, and thought are spent before this experience is gained. Otherwise he is no specialist, and should not be so counted. Now it might be said that after the acquisition of this knowledge he can at the same time practice general medicine and surgery and on *special* occasions operate as a gynecologist. There are two reasons why he can not or should not do this: First, because as either a physician or surgeon he runs the risk of communicating to the patient in whose peritoneal cavity he is operating an infection transmitted from other patients. Secondly, if he is a successful gynecologist, he has no time in which to practice medicine. So it can be said of the numerous specialties. If a man has by dint of long study, diligent application, and a thorough experience fitted himself in any special line, his claim that he has superior knowledge in this line is just and true. There is no such thing as *drifting* into a specialty. The man that tries to do so is no more proficient than his professional brethren who have not *drifted* from the regular profession. It is said that "necessity is the mother of invention." It can be as truly said that necessity is the mother of specialism in medicine, as well as in other profes-

sions and trades. To specialism the science of medicine and surgery is more indebted than to all other things or sources combined. It has done more to advance each as a science in the last decade or two than had been done in a half century before. Specialism commands the respect and admiration of all good men. It is but the offspring of general medicine and surgery, born of necessity, because the day and hour required it; is ever respectful to its parents, has grown steadily from its infancy, and is now recognized as a giant in strength, culture, and other accomplishments.

We are pleased to present to our readers the first of a series of six lectures delivered by Prof. H. O. Walker in the Detroit Medical College. These lectures were delivered before invited physicians and the senior class—and will be published in each number of the Quarterly until all have appeared.

Correspondence.

NEW YORK LETTER.

[FROM OUR SPECIAL CORRESPONDENT.]

APPENDICITIS STRICTLY A SURGICAL DISEASE; MORPHINE AND SALICYLATE SODA IN APPENDICITIS; A NEW GASTROGRAPH; STERILIZED GAUZE; A PORTABLE STERILIZER; PYLORECTOMY—GASTRODUODENOSTOMY—MURPHY BUTTON; McBURNEY'S INCISION IN APPENDICITIS; TRANSVERSE SACRAL INCISION; STRICTURE PYLORUS—PYLOROPLASTY; APPENDICEAL CYST; BILIARY CALCULI—CHOLOCYSTENTERECTOMY; COCAINE AND STOMACH WASHING IN STRANGULATED HERNIA; SALINE INFUSION A PART OF OPERATIVE TECHNIQUE; CARCINOMATOUS INFILTRATION OF THE WHOLE COLON—ILEOSTOMY; INTUSSUSCEPTION IN CHILDREN; EXCISION WHOLE TRANSVERSE COLON—RECOVERY.

GENERAL MEETING, ACADEMY OF MEDICINE.

Dr. Wyeth in a paper on "Appendicitis Strictly a Surgical Disease," read before the general meeting of the Academy on April 5th, maintained that the danger to life which makes appendicitis strictly a surgical disease arises from peritonitis. There is no drug which can prevent the passage of septic organisms and ptomaines through the impaired wall of the appendix. No fatal case has been met with that could not be ascribed to delay in surgical interference. No one can determine whether or not gangrene is about to occur, or to what extent peritonitis may develop. Early surgical interference has shown the best ratio of recoveries. With a competent surgeon called in during the first twelve hours the death-rate could be reduced to five per cent. In Dr. Bull's statistics of three hundred and forty-one cases of chronic relapsing appendicitis the mortality was not quite two per cent. The median incision facilitates a thorough irrigation, and ventral hernia does not occur if the wound is properly made. Secure an experienced abdominal surgeon and operate in the first twenty-four hours, and the mortality will be reduced to a minimum.

Dr. Brand, having lost three cases several years ago, believes that, if the diagnosis of appendicitis has been made, a surgeon should be at once called in. This has been his rule since 1884. Do not give morphine, as it will cause constipation, obscure the symptoms, and give a sense of false security. If pain is severe administer small quantities of chloroform. No food should be given.

Dr. S. H. Dessau, from the standpoint of the general practitioner, heartily agreed with Dr. Brand, that in our dealings with appendicitis prompt and accurate diagnosis is of the greatest importance.

Dr. A. M. Lesser called attention to the frequency of cases of supposed appendicitis which were nothing more than examples of acute entero-colitis. Many cases of *la grippe* and other acute diseases cause tenderness in the region of the appendix. Opium has proved harmful. The administration of salicylate of soda will relieve pain, increase excretion, and after a few doses diminish tympany to such a degree that abdominal palpation will be greatly facilitated. One gram every two hours, for two or three doses, well diluted with water; no food; water *ad libitum*, and irrigation of the bowels with water. If no abatement is noticed within forty-eight hours, operate.

Dr. R. F. Morris: Appendicitis as it is now recognized is an infective exudative inflammation of the appendix caused by bacterial invasion. It is not at any time a medical disease, for the reason that no drug or drugs can at any time destroy the bacteria. The earlier we operate the less infection we have to overcome. A one-per-cent. death-rate is due to inexperience. Deaths and hernia are preventable in appendicitis. Early operation, no pus, an inch and a half incision, keep the patient eight days in bed, and he leaves his room on the tenth day. I do not meet any cases of catarrhal appendicitis.

Dr. Wyeth: It seems to me the use of salicylate of sodium would be absolutely impotent to correct any suppurative process involving the peritoneum. It would prove an *ignis fatuus*, leading us astray and increase our mortality rate. I am not willing to risk the small incision on my patients. A free incision with carefully arranged pads affords the best means for inspecting the parts and protecting the peritoneal cavity. I have never had any trouble from hernia after operation.

"A New Gastrograph," with demonstrations, was the subject of a paper by Dr. Max Einhoon (May 28th). With it he claimed that the variations in the movements of the stomach can be announced and a permanent record made for the purpose of ascertaining the tonicity of that organ. He described three varieties, normal, too rapid, and lethargic stomachs. The instrument consisted of a brass ball, one half inch in diameter, attached to an insulated wire, which is to be swallowed by the patient. Inside the ball is a "hedgehog" arrangement and a small metal bullet, which, when the ball is moved by the action of the stomach, completes the circuit and is announced by a "click" of the machine and a dash on the paper-ribbon, in the same way as stock quotations are printed on the familiar broker's "ticker."

SURGICAL SECTION, ACADEMY OF MEDICINE.

At a recent meeting of the Section on Surgery of the Academy of Medicine, Dr. Wm. T. Bull advocated the use of sterilized absorbent gauze for draining the peritoneal cavity after operations for appendicitis. This is only another of the many instances of the replacement of the aseptic for the antiseptic in all branches of surgical work. In view of this fact it is a question of serious import to workers in this line, as to how we can best secure instruments, gauze, catgut, etc., in an aseptic condition, and that at the home of our patients.

Dr. Willy Meyer deserves great credit for his work in this direction, and the "portable sterilizer" for private operations, exhibited before the Surgical Section, seems to meet every requirement, viz., facilities for the sterilization of instruments by boiling in one to one and a half per cent. soda solution, and of the gauze for the dressings, of silk, drainage-tubes, gauze, sponges, nail-brushes, and towels by steam. Briefly it consists of a "kettle of copper, nickel-plated, top 17 by $8\frac{1}{2}$ inches; bottom $15\frac{1}{2}$ by 7 inches; height $6\frac{1}{2}$ inches, with two lateral wooden handles and a lid, which also has such a handle; carries in its bottom a perforated tray, as we know it from Rolter's apparatus. The latter has a brim an inch and a half high, and two upright perforated metal handles in which to insert a blunt hook for the purpose of lifting the tray out of the boiling water. A pair of such hooks accompany the apparatus. Two and one half inches

above the lower bottom tray stands, on metal feet, a second perforated tray, with top tray, also with a hole in its handles. It has a brim of three and one half inches height, and near to its inner side a small gutter which runs all around and is punched by small holes, three inches apart, for the outlet of the condensed steam, provided any should gather inside of the tray, which does not occur according to the designer's observations. Its brim does not touch the wall of the kettle. It receives all the other material, dressing, etc., mentioned above. On account of the distance between the brim and the kettle wall the top tray will not be moistened by condensed steam. Further accessories are a stand of nickel-plated iron, and an alcohol lamp with ten Bunsen burners."

Dr. Meyer claims (1) that it has sufficient inside space to hold every thing that is needed for "the operation as such." Instruments, dressings, etc., all can be easily put into the sterilizer at home and the latter then carried along, with the help of a cover of gray canvas with a leather handle, like a doctor's satchel. (2) All materials can be sterilized at the patient's home just before operation. (3) Instruments and dressings with all the other necessary materials for the operation as such, are rendered aseptic in the same apparatus at the same time. (4) Two quarts of water fully cover all the instruments which will be needed for a major operation. If we add two heaping tablespoonfuls of pulverized soda, the one to one and one half soda solution ordinarily used for boiling instruments is ready. (Boiling without the soda is all that is needed.) (5) The alcohol lamp being filled up to a certain mark on the burner holds exactly as much alcohol as is needed to bring to a thorough boiling the two quarts of soda-water, and keep it boiling for fully twenty-four minutes. This, with the six minutes required to bring it to the boiling point, makes the sterilization last exactly thirty minutes, Gas, or a gasoline burner may as well be used, and if in a hurry, hot water may be poured into the kettle. When once lighted the alcohol lamp should burn until used up. The sterilizer is made in three sizes, the price ranging from $18 to $21.

Dr. Willy Meyer (April 9th) exhibited a woman, forty-three years, who has had stomach trouble for four years; pain two years, with loss in weight of forty pounds. Her mother died of cancer

of the stomach. In the region of the pylorus a growth the size of a walnut could be felt, which moved up and down with respiration. Gastroscopy showed the stomach dilated, but no tumor visible. The contents of the stomach contained an abundance of hydrochloric acid, and a diagnosis of non-malignant stricture was made. Operation, March 24th. Pylorus hard, and a number of small, hard nodules were found on the lesser curvature of the stomach, and a white, hard mass on the anterior wall, evidently metastatic. The tumor was entirely movable. By a circular incision the pylorus was excised and the stomach closed. The male end of a Murphy button was inserted into the duodenum, and the female end into the posterior stomach wall, and the ends easily approximated. Time, eight minutes. Five inches were removed from the greater curvature and three inches from the lesser. The patient was nourished *per rectum* for three days. The button was discharged on the twenty-first day after great straining on the part of the patient. She is now in good health, good appetite, and well nourished. Microscopical examination shows the growth to be fibrous tissue.

SURGICAL SOCIETY.

McBurney (March 28th), in a paper on the "Incision in Operations for Appendicitis," said that he has discarded the median incision. During his early operations he incised the abdominal wall just to the right of the rectus, but he has found that an incision nearer to the anterior superior spine, at right angles to a line from that point to the umbilicus, more thoroughly exposes the cecum, and in case of abscess there is less danger of infecting the general cavity. He believes that hernia is not due to the length of the incision but to irregular coaptation and union of the various components of the abdominal wall. In his more recent cases Dr. McBurney has pursued the following plan of entering and closing the abdominal cavity. Having made the above incision through the skin and areolar tissue, a small incision is made through deep fascia and external oblique muscle, in a line parallel to their fibers, which is then enlarged by tearing with the fingers, and the edges held apart with retractors. The same process is repeated in going through the internal oblique and tranversalis muscles and their sheaths, also the peritoneum,

which are thus simply separated in the line of their fibers and not cut or impaired in any way. Having removed the appendix, first the edges of peritoneum, second the transversalis and internal oblique and their sheaths, third the external oblique and the deep fascia, and lastly the skin are separately united. Thus the uncut layers "fall together in a sort of gridiron fashion," all the structures being restored to their normal relation. The advantages claimed are: (1) The restoration without injury of the various layers of the abdominal wall to their natural position. (2) No hemorrhage except from the skin incision occurs. (3) No nerves are divided. The only disadvantage is the number of assistants necessary to handle the four retractors. Catgut is used in suturing the various layers.

Curtis (B. F.), in speaking of pyloroplasty thought it a comparatively safe operation, and showed a man on whom he had operated for suspected malignant stricture of the pyloric end of the stomach, but which when exposed to view led him to prefer the less radical operation. The incision was in the median line from the tip of the ensiform, and extended at right angles. Rectal feeding for four or five days, solid food at the end of three weeks. Pathologist reported round-cell infiltration, verging on to adenoma, which might become malignant.

The many variations in the condition of the appendix, the result of recurrent appendicitis, was beautifully illustrated in a fresh specimen shown by McBurney, the two proximal strictures being pervious, admitting a fine probe; the distal one shut off, the tip of the appendix distended with fluid to the size of a small bird's egg.

A man, thirty-four years, who was suffering from pain just below the right costal border, radiating to the chest, constipated, chills, fever, light stools, tongue coated, and skin yellow, with a hard mass, painful on palpation, over the region of the gall-bladder, and bile pigment in the urine, was admitted to the Presbyterian Hospital in December, 1893, and kept under observation until January, 1894, when the trouble subsided, though the mass remained. Diagnosis: Biliary calculi. Discharged. March 12th he returned with exacerbation of all the symptoms. Dr. Briddon made an oblique incision one inch below lower border of the ribs. An inflammatory mass filled the normal position of the gall-blad-

der, which was separated by blunt dissection, and its walls found very much thickened and contracted. On opening it was found to contain twelve to fifteen small calculi. The gall-bladder was then cut off. Owing to adhesions it was found impossible to ligate the vessels, which were clamped, and the clamps left *in situ* for forty-eight hours. No stones were found in the ducts, nor could a probe be passed into the intestines. The wound was packed with iodoform gauze. Bile, discharged through the wound for three days, now passes into the intestine. Wound was entirely closed at the end of a month.

The usefulness of a weak solution of cocaine, as demonstrated by Dr. Bryant, in operating for strangulated inguinal hernia is well worth keeping in mind: A man, seventy-six years, who had been suffering from that condition for five days, with fecal vomiting and extreme prostration, almost collapse, so that etherization was out of the question. Forty minims of a two-per-cent. solution were injected in the line of the intended incision, and the sac was opened, the gut returned to the cavity in seven and a half minutes. Much stress was laid on the fact that the stomach was washed out immediately after operation, to remove all fecal matter and prevent further vomiting, which did not recur. The hernia is not cured, but the man lives.

Saline infusion during operation has obtained an impetus from the effect secured by Dr. McBurney in a case reported by him May 8th. During the removal of a sarcoma of the kidney a large quantity of a hot saline solution was injected into the vein with marked good effect on the pulse, which became stronger than before the operation was begun, and remained so, never going back to its former poor quality. The tumor weighed nine and three fourths pounds. The large size of the vessels precluded the use of ligatures, and clamps were applied and left *in situ* for three days. This is the first time that infusion has been included as a part of the technique in major operations, and will, if carried out, no doubt save many lives.

A single man, thirty-four years, was presented by Dr. Briddon May 23d, who for twelve years had been suffering from constipation, tenesmus, piles, and discharge of blood from the rectum. Two years ago he was operated on at the City Hospital for hemorrhoids, and for a time seemed better, but later had attacks

of diarrhea, with stinking dejections, sometimes bloody. Had pain in the left inguinal region. Rectal examination negative, but on exerting considerable pressure on the abdomen when in the sitting posture an indurated mass can be felt about six inches up the rectum. On opening the abdomen a hard, indurated mass was found just at the sigmoid flexure, and so firmly bound down and thickened that colotomy was impracticable. On following the colon around this induration was found to extend throughout its whole length, also involving the cecum, the peritoneal coat being studded with nodules presenting the appearance of boiled sago. The ileum showed a distinct line of demarkation, and at a point two or three inches from its junction with the cecum was brought into the opening in the right iliac region, and a fistula established. Pain has stopped, fecal matter discharges from the fistula, also some bloody, stinking discharge from the rectum. Pathological diagnosis of a piece from the mass was said to be malignant.

Intussusception of the colon and ileum into the rectum is a rather infrequent condition, and one of the most serious difficulties in its reduction was illustrated by a case reported by Dr. Briddon. A child, eight months old, had been well up to twenty-four hours before admission on May 10th. It was seized with sudden abdominal pain and vomited. A little later the stools were bloody and rather profuse. Before opening the abdomen a tumor could be felt near the median line to the left. A median incision, from the ensiform to the symphysis, was made, and the distended and congested colon at once protruded. The intussusception, which extended into the rectum, could be seen to move inside the colon, so great was the distension and consequent thinning of the colon. Gentle traction and compression were tried in order to reduce the mass, but only succeeded in getting it as far as the liver, where the adhesions were so firm that dilatation of the sheath had to be resorted to to effect its release. The child was in collapse on the table, and died two hours later. No gangrene present.

Abbe related a case of a child in which he had to resort to the same procedure in order to separate the adhesions. He thought it might be better to make an artificial anus.

Curtis (B. F.) condemned the use of the syphon, and said the

only safe way was to elevate the vessel to a certain height and allow the water to run in, carefully watching the quantity and effect.

Van Arsdale had made an artificial anus in a child under one year, but it too died.

All seemed to think that gas and water inflation were rather uncertain and not without serious risks.

NEW YORK CANCER HOSPITAL.

Of the several thousand interesting cases of malignant disease operated upon in this hospital, the following is without parallel, nor does the literature at the writer's disposal record any case in which the whole transverse colon has been excised.

Mrs. B. G., aged 36, U. S., for ten years has suffered from epigastric pain and constipation. During the past year the pain has been very severe, and aggravated by coughing, talking, or any effort necessitating deep inspiration. She has lost flesh and strength, though now fairly well nourished. Her four aunts died from "cancer of the breast and womb."

When admitted to the hospital (May 5th) she complained of much abdominal pain, with such marked tenderness in the epigastrium that palpation was impossible. Temperature 99.2° F., pulse 80. Hot poultices to the abdomen, and morphine given to relieve the pain.

On May 11th Dr. Outerbridge made a median incision above the umbilicus, but owing to the firm adhesion of the omentum to the abdominal wall the incision was extended below the umbilicus and the cavity entered at that point. The adherent omentum was then carefully separated and the viscera exposed to the ensiform cartilege. Examination showed that the growth involved the whole lumen of the transverse colon, which was enlarged to the size of a cocoanut. The great omentum was adherent, as were also several folds of the small intestines. The latter were not infiltrated, and easily separated. Beginning above, the omentum was ligated all along the greater curvature of the stomach (which was perforated by at least one ligature) so closely that it was found necessary to tie off the gastro-epiploica dextra and sinistra. Ligatures were then passed on either side of the omentum, and more than half of its central portion cut

away, extending from its lower border to its attachment to the stomach. Before cutting through the colon the meso-colon was tied off and proved the most difficult part of the operation. Clamps were then applied to the hepatic flexure and just below the splenic flexure of the colon, and two along the greater curvature of the stomach. Having loosened the attachment of the ascending and descending colon the transverse colon was lifted up and the abdominal viscera well covered with sterilized gauze and sponges. The patient was then turned on the side, and the colon cut across close to the forceps. The cut ends were then thoroughly washed, great care being taken to avoid infection of the general cavity. The ease with which this was accomplished and ultimate result proved the wisdom of turning the patient on her side. Purse-string sutures were put in, and the largest size Murphy button introduced. Owing to the thickness of the colon and the relatively small size of the button some difficulty was experienced in approximating the two halves of the button, and as there was considerable tension the edges of the omentum were sewn over the line of juncture of the ends of the colon. The abdominal cavity was thoroughly washed out and closed with a single line of silk-worm gut sutures, including the whole thickness of the wall. Time of operation one hour and forty-five minutes.

The condition of the patient was good throughout the whole operation, though the pulse ran up to 128 a short time afterward. At 6 P. M. the same day the temperature was 98.6° F., pulse 110, respiration 127; some pain, and a little vomiting. Hot saline enemata (four ounces) were given every six hours on the second day. Gas passed freely. Hot water *per orem* on the fifth day, and peptonized milk on the day following. The bowels moved voluntarily on the eighth day without pain or discomfort. The temperature during the first four days ranged between 99° F. and 100° F., only once reaching 100.6°, and since the sixth day has been below 99°. Pulse range was from 84 to 100. To-day (May 25th), the fourteenth day, when seen by the writer, the patient was very comfortable, having but slight tenderness over the region of the colon. The twelve-inch incision had united primarily, the sutures having been removed on the tenth day. As the patient was anxious to have solid food, her wish was granted.

It may be of interest to state that the instruments, silk, etc., were boiled in plain water, the gauze steam sterilized, and the cavity irrigated with boiled Croton water without filtration, poured from an ordinary two-quart pitcher. The hands of the operator and assistants were scrubbed with hot water and tincture of green soap, and the hands immersed in ninety-five per cent. alcohol, no antiseptics being used in the preparation of the patient or during the operation.

"A LETTER FROM SOUTH AFRICA."

EDITORS MATHEWS' MEDICAL QUARTERLY:

In your last number there appeared a letter with the above heading, and in it reference was made to the endemic hematuria of the Cape as a disease the origin of which was totally unknown, while in fact in 1864 reference to this disease and its origin was made by several writers as being of microbic origin and caused by the *Bilharzia Capensis.*

John Harly, Med. Chir. Trans., vol. xlvii, of 1864, also vol. iii, page 379, also Hooper's Phys. Vade Mecum, of 1864, also also Druitt's Vade Mecum, 1878.

R. C. ELLIOTT, M. D.,

June 16, 1894. Dudley, Texas, formerly of Highlands, South Africa.

Necrology.

DR. CHARLES EDOUARD BROWN-SÉQUARD.

The *New York Medical Journal* contained the following clipping from the *Lancet* for April 14, 1894:

Dr. Brown-Séquard was of French and Irish parentage, and was born in the Island of Mauritius in 1817. His earlier history is somewhat obscure, but it seems that he left Mauritius when still a child and went to the United States, where he received his early education. In 1838 he went to Paris, where he devoted himself almost entirely to experimental physiology, and in 1849 he described the sensory decussation in the spinal cord with which his name has since become so closely associated. He occupied himself chiefly in the study of nervous physiology and pathology, and established so great a reputation in that field that he was asked to deliver a course of lectures before the Royal College of Surgeons of England. These lectures aroused the keenest interest, not only because they gave a clear and concise account of the current knowledge of nervous physiology and pathology, but because they contained much that was new and the result of the author's experiments. The originality of his views, the care taken in the acquirement of this knowledge, and the charming personality of the man excited an interest in nervous physiology and pathology, and so successful were the lectures that shortly after he was asked to deliver them in Edinburgh, in Glasgow, and in Dublin. In 1859 he established himself in London, and was appointed physician to the National Hospital for the Paralyzed and Epileptic. He also joined the Royal College of Physicians of London. He stayed, however, only a short time in England, and went to America to accept a chair at Harvard University, where he remained five years. At the end of that time he returned to Paris, where he became professor at the École de Médecine. In 1873 he returned to America and began to practice in New York, and edited, in connection with Dr. Seguin, the *Archives of Scientific and Practical Medicine.* In 1876 he was again in London delivering a course of lectures in which he combated the current doctrines of nervous physiology and also other theories which have since been generally accepted. Two years later he once more returned to Paris and succeeded Claude Bernard as professor at the Collége de France, where he remained until his death.

He was an honest, single-minded man, devoting all his energies during the last years of his life to the investigation of his testicular fluid. In every thing that he did a patient search for knowledge and truth was one of his highest characteristics. The sacrifices he made can never be fully appreciated except by those who knew him best. The following extract from a letter to one of his friends will serve as an illustration of this: "I have a very much harder fight for the doctrines relating to the brain than I had, at the time I first became acquainted with you, for doctrines relating to the spinal cord. If I did not love truth much more than comfort, ease, and quietness, I would give up the painful, heavy task I have given to myself. So long, however, as I have a breath of power of mind and body, I shall continue the efforts begun in London."

Dr. Brown-Séquard was a man of simple habits, going to bed and rising very early, as he found these hours best suited to his work. He cared for nothing outside of physiology, and spent nearly 10,000 francs during the last two years in dispensing his extract gratuitously. The writer gives the following illustrations of how little he cared for money: A wealthy American asked him to go to Italy to see his son, and he refused on the ground that it was not a case where his advice was particularly indicated, and suggested another physician. The American wrote that it was Brown-Séquard he wanted, and offered the enormous sum of $50,000; but he had made up his mind in this particular case, and the money had no temptation for him. On another occasion he received, when in London, a telegram asking him to go to Liverpool to see a patient, and telling him that the fee would be $1,000. He replied that he should be in Liverpool in a day or two to sail for New York, when he would see the patient, and the fee would be five guineas. It is hardly to be wondered at, says the writer, that he died far from wealthy.

A Word to the Busy Doctor.

One of the most difficult of all rectal diseases to treat is fistula in ano. It is also one of the most common met, some claiming that it predominates piles as a rectal affection. The disease presents itself under so many different circumstances, and can be attributed to so many different causes; and yet the surgeon meets with many cases of fistula in which no definite cause can be traced. The varieties of the disease are many, and the conditions varied. It may be manifest as a simple superficial sinus measuring only a few lines in length, or it may be that one or both buttocks are invaded by large channels and many cavities. The inroads of the disease may be such that both the rectum and vagina are invaded, for the cure of which it will require much surgery and the most delicate skill. Diatheses has much to do in the production of this very troublesome surgical affection. The tuberculous patient is particularly liable to it, and the syphilitic patient is often the subject of it.

It must be remembered that fistula in ano begins with an abscess, and that all abscesses around the rectum must be looked upon with suspicion, in that a fistula may be the result. Some say that the location of such abscesses is generally in the ischio-rectal fossæ. But it must be remembered that it may originate in any of the cellular tissue around the rectum. Indeed we often meet with fistulæ, originating in an abscess near the rectum, yet having no connection with it. These can not in reality be called fistulæ in ano, as the anus or rectum is not included in the operation made for their relief. For instance, a channel may have its beginning immediately over the sacrum or coccyx, and lead upward instead of toward the bowel. It would be folly to push the director or cut into the bowel in doing the operation for such condition; or a buttock may have been the seat of the abscess and of the consequent fistula, and yet the location is too far from the bowel to admit of an incision into it. These conditions should be definitely settled before an operation is done.

It is therefore of the greatest importance to diagnosticate a rectal abscess early, that a free evacuation of pus can be had and free drainage be established. The practice of allowing an abscess to "break" wherever located, and especially around the rectum, should be condemned by all right-thinking surgeons. A *free* and *early* incision should always be made. Outside of any fear of sepsis, the inroads that pus makes is the prime and essential cause of fistula. The physician that neglects to so deal with a rectal abscess is in the main responsible for the consequent fistula; for had he opened the abscess according to the above rules, fistula in very many cases can be prevented.

In an article in the last issue of the Quarterly I gave what I deemed to be the best way of dealing with an abscess around the rectum. The treatment can be embraced in three words, viz., *free drainage—drainage.* No puncture will suffice. An opening should be made large enough to introduce the fingers, in order to break up all loculi, and then drainage instituted by gauze, etc. The agents most effectual for irrigation are peroxide hydrogen, bichloride mercury, and carbolic acid. It must be seen that the abscess heals from the bottom.

It is of great moment to diagnosticate between an acute, or hot, abscess and a cold one. Though in the light of modern surgery these are ill terms, they will express the meaning. *Hot* abscesses are of course acute in their origin, and *cold* abscesses are of a chronic course. The latter are attributable in the great majority of instances to a tubercular origin. Such abscesses need more careful attention than acute ones. One is local, the other constitutional in origin.

Considering, then, that a fistula has followed an abscess, whether due to bad treatment or the natural disposition to do so, a diagnosis must be made of the character or variety of fistula that exists, such for instance as external, internal, and complete.

Whether progressive, or non-progressive; whether complicated with other diseases, or whether such diseases caused the fistula. Whether it is necessary to cut into the bowel during the operation, and if one or both buttocks are invaded, in the latter condition constituting the horseshoe variety. Especially to decide if a stricture of the bowel exists. It must be remembered, too, that the contiguous parts may be invaded, as the vagina, urethra, bladder, etc. Before beginning the operation all these points should be decided if *possible*. The method for such decision is the employment of probes, speculum, and finger. The latter is the best of all these, for with it a channel can be felt that can not be seen, and the internal opening is often detected in this way. The probe can be inserted into an external, and sometimes into an internal opening to decide whether the sinus is complete or not. The speculum is only used in such cases to enable us to see the internal opening if possible.

VERY much has been written concerning the necessity of finding the *internal* opening of a fistula where an external opening exists. The plan usually described and insisted upon is to introduce a speculum, then inject the external opening with milk, or a colored fluid, and watch for its appearance in the bowel. So great has been the stress laid to the importance of the finding of the internal opening that many operations have been abandoned because it was not found. This doctrine, to my mind, is very faulty. Every case of fistula in ano that can not be cured by other methods (and they are few) should be operated on whether an internal opening is found or not. Nor is it, in my opinion, worth while to waste time in making an effort to find an internal opening. When the operation is made is time enough to find the internal opening, which will be done by searching for it after the main cut is made. Certainly an operation should not be abandoned because an internal opening can not be found. Having decided to operate, which among the many different methods is the best, and how should it be done? These queries we will try to decide in our next talk.

With Our Exchanges.

DISEASES OF THE RECTUM.

Deaver, J. B.: Stricture of the Sigmoid Flexure and First Portion of Rectum. (*American Lancet*, April, 1894.)

F. W. R., aged about thirty, consulted me July 27th, stating that he had a stricture of the large bowel, for which he was passing at intervals of from four to five days Nos. 9 and 11 Wales bougies by the advice of his physician. Upon being questioned, he described the symptoms characteristic of stricture of the sigmoid flexure, or of the latter and the first portion of the rectum. He further stated that without the aid of medicine taken internally or the use of enemas it was impossible for him to have a passage. Digital examination of the rectum revealed nothing other than a rather capacious organ. Examination with the bougie showed the presence of an unquestionable obstruction nine inches within the anus. I advised continuance of the local treatment, but disapproved of his using the bougie himself. I passed a bougie up to the time of his last visit to me, when, upon introducing one a size larger than the one usually used, namely, No. 12—which I had also passed before with but little difficulty—as the point of the instrument was engaging in the stricture he suddenly lurched forward upon the operating-chair, and before I could withdraw the instrument he rebounded, as it were, upon the point of the bougie. This was immediately followed by severe abdominal pain. I feared the bowel had been penetrated on the anal side of the stricture, but was not certain, as the instrument was withdrawn clear of blood; neither was there any blood passed after its withdrawal. I advised that he go to the hospital, where he would have the benefit of absolute rest and at the same time give me the opportunity of having him closely observed. Contrary to my advice he went to his place of business, but came back to my office some time afterward, complaining of the pain being as severe as when he left me earlier in the morning. He now consented to go to the hospital. The pain

was so severe as to require large doses of morphine to relieve him. He would not consent to an abdominal section, therefore I was powerless to do other than administer anodynes, counter-irritants, etc. He died the following night. The abdominal walls remained perfectly rigid, with the absence of tympany until four hours before he died, when there was pronounced distension. An autopsy made shortly after death showed the presence of a purulent peritonitis and a linear stricture involving the terminal portion of the sigmoid flexure and the first portion of the rectum. The bowel immediately below the stricture, which was very much dilated, with the wall nearly as thin as tissue paper, showed a perforation. Upon opening the bowel there were present cicatrices which were evidently the result of ulceration. There were present old adhesions in the abdominal cavity in the neighborhood of the descending colon and sigmoid flexure. Upon opening the chest, there were present adhesions at the apices of the lungs. No further evidence of organic disease.

A few hours before his death, in a conversation with his mother, I learned, much to my surprise, that he had for some time back been giving himself an enema after each meal; this, to some extent at least, evidently accounted for the very much dilated and thin condition of the wall of the bowel, rendering it susceptible to penetration by the bougie.

In speaking of the condition represented by the above case, the author remarked that the first portion of the rectum, like the sigmoid flexure, is connected to the back part of the abdominal cavity by a reflection of the peritoneum, the meso-rectum. On account of the bend made by the junction of the first and second portions of the rectum, it can be readily seen how the point of a non-flexible bougie is arrested by contact with the wall of the bowel at this point, which offers resistance to its further passage, and a diagnosis of pathological obstruction be made; or it may be that the bowel, owing to preternatural length of the meso-rectum, will be carried in advance of the point of the instrument to or beyond the median line in the neighborhood of the pubis, or if the instrument by chance should pass into the sigmoid flexure, the latter, owing to the meso-sigmoid, may be carried to or beyond the median line in the neighborhood of the umbilicus; either of which events might give rise

to the belief that the bougie had passed into the bowel beyond, if not through, a supposed stricture.

There is a question, a doubt, in the minds of some as to the possibility of being able to carry a flexible rubber tube or bougie through and beyond the sigmoid flexure. This has been tried upon the dead body in a number of instances, and, as it has not proven successful, the deduction has been made that it is impossible in the living subject. I can not admit this to be so. In the dead body there is neither muscular contractility nor the normal moisture of mucus.

We well know that it is much easier to introduce a bougie through the normal urethra in the living subject than it is in the cadaver, and yet in the case of the urethra counter-pressure can be brought to bear to aid in the introduction of the instrument. I have very satisfactorily demonstrated upon many occasions the possibility of being able to circuit the sigmoid flexure with a soft flexible tube such as the long flexible rectal bougie and the long flexible colon-tube. In certain cases of intestinal obstruction I regard the passage of a soft flexible tube into the sigmoid flexure, through which water can be thrown and the capacity of the large bowel ascertained, an important aid in the diagnosis between obstruction of the small and obstruction of the large intestine.

With the subjective symptoms of stricture of the large bowel present—namely, constipation, or possibly attacks of diarrhea, the passage of ribbon-shaped stools or of choppy stools covered with mucus and blood or preceded or followed by the passage of mucus and blood attended by tenesmus (the lower portion of the rectum being intact, as proven by a digital examination)—it does not absolutely follow that a stricture is the cause in all instances, as we may see this train of symptoms consequent upon a subacute or chronic catarrhal inflammation of the colon or of the sigmoid flexure, or in ulceration of the latter; therefore, before we can get more definitely at the exact condition of affairs, it will be necessary to resort to instrumental interference in the introduction of graduated sizes of flexible rubber bougies, when a diagnosis can generally be arrived at with a very fair degree of certainty.

Jelks: Fistula in Ano; Report of Cases. (*Memphis Medical Monthly*, March, 1894.)

The study and the treatment of rectal diseases have received far too little attention from the reputable class of doctors in time past, and hence the room and profits to the charlatan and quack who displays on beautifully pictured circulars in red and blue the various diseases common to the rectum, and we who have called ourselves humanitarians have divers times been too slow in sympathizing with our suffering fellow creature who has some disease common to these parts. We have been too slow in perceiving that a man or woman suffering with rectal disease is a most willing creature to compensate us for our services.

One of the most frequent, painful, and to the surgeon one of the most important of the conditions classed among diseases of the rectum is fistula; and the fact that many times the good surgeon is rewarded with a most signal failure in his attempt to treat successfully this affection renders the exchange of ideas of some value.

Upon diagnosis I would say we should make ourselves familiar with the nature and cause, if possible, of every case, for which it is very essential to take the greatest care in physical examination. Without this I do not believe a positive diagnosis can be arrived at. As an illustration I would beg to mention the case of a gentleman who applied to me, from Morton, Ark., with a supposed case of hemorrhoids, stating as a reason for his belief that he could feel them out, and another doctor had confirmed his diagnosis, though upon inquiry neither this nor any other doctor had made a physical examination in his six years' round with itinerant and home physicians.

Upon physical examination I found a growth or excrescence just outside the sphincter, at the apex of which was found a small opening leading into a fistulous tract. The patient complained greatly of the weeping, which in these cases is a most constant and annoying symptom. A diagnosis of fistula upon first examination is sometimes exceedingly difficult, if not impossible, as many times a recent fistula will close up almost entirely, leaving for the surgeon's aid in diagnosis only the history of frequently recurring abscesses in the neighborhood of rectum, which, after a time, will break either internally or externally, with the

discharge of a greater or less quantity of pus, after which, for an indefinite length of time, the patient thinks himself about well; but not so, for the abscess cavity is soon again distended and more of the surrounding tissues taken up in the disease process. Now, if you please, this is the best time to examine the case to obtain a most thorough knowledge of the number and course of the fistulous tracts. With the finger the more superficial ones may be followed, and, if there be an external opening, it should be kept opened until an operation is performed; this opening will give free drainage, and the burrowing process, which would otherwise continue, is to the greatest extent prevented. If there be no external opening, or the tracts be very angular, an opening should be made which will give the most unobstructed drainage. This procedure, with the addition of thorough cleansing and the injection of a strong solution of carbolic acid, will, in a few instances of recent abscess which would ultimately have been a complete fistula, cure the case. If, however, the case has become a chronic one or a complete fistula, nothing short of the knife will avail any thing, and the patient should be anesthetized, the sphincter divulsed, all the tracts followed up and divided, and the hard cartilage-like substance, which lines the tracts of all cases of long standing, must be curetted and dissected out, for, if allowed to remain, the operation will likely prove a failure.

Some have said this divulsion of the sphincter is unnecessary; but I don't believe that a fistula which involves one or both sphincter muscles should be cut until this is done and the parts thereby put at rest, which permits access to every part of the diseased tissue, the parts to heal quicker, with less cicatrical tissue, and leaves the parts in a more normal condition. There is after this procedure less liability to incontinence.

There has been much said in reference to the use of carbolic acid and other caustic solutions injected into these tracts, but I have never seen any benefit derived from them; and if we take into consideration the fact that these fistulæ are lined by a hard cartilage-like substance, so-called pyogenic membranes, without vitality, and therefore without any tendency to unite with tissues of its own or any other kind, we can see the folly of using such means. I have myself tried, and known other physicians to try, the

injection of these, and uniformly with no benefit, and the knife was at last resorted to. The knife should be the first, and I think the immediate, advice in these cases, as the tendency is to malignancy, especially if the patient be of consumptive or cancerous diathesis.

The following cases will illustrate the value of a first and immediate advice to use the knife, and making the first operation a thorough one:

Case 1. Mr. R., of Batesville, Ark., age forty, had, when I first saw him, been suffering with a complete fistula for six years. A number of physicians had treated him in as many ways. The external orifice midway between left natis and verge of sphincter; the canal pursued a zigzag course toward perineum, and then at almost a right angle it passed upward and backward to enter bowel two and a half inches above. An operation was advised, but rejected. Every other treatment was instituted with no benefit.

Case 2. Mr. K., of Batesville, Ark., was advised an operation for fistula, but would not consent. He was of a consumptive diathesis, and malignancy was soon developed, and after a long and incessant suffering he succumbed to his torturous affection.

Case 3. Mr. E. W., of DeView, Ark.; presented to me by my friend, Dr. E. O. Grigsby, and in speaking of my having used the injecting plan in such cases with no benefit, I learned that he too had tried it in this case for some time. On September 15th I operated, and found the fistula a deep, complete one of six or seven years' standing. When fully under the influence of chloroform I divulsed the sphincter, washed the bowel out well with strong bichloride of mercury solution, and then divided the tissues into the gut on grooved director; found and opened up all connecting tracts and pockets; curetted and dissected out all of the hard linings of the tracts, and applied, after a tampon had been inserted, a dressing of balsam Peru on corrosive sublimate gauze; applied compress and T bandage, when the patient was put to bed and given a hypodermic injection of morphine; dressings reapplied daily for a week, and then every other day for another week, when patient was dismissed well at end of second week.

Case 4. Mr. C., of Mississippi, applied to me with fistula which had once before been operated upon; the case was an ugly

one of several years' standing—consumptive diathesis. On the introduction of my probe it came into contact with that hard substance which in this case elicited the sensation not unlike that obtained when dead bone is touched with the probe. The failure in the first operation upon this case was no doubt due to the fact that the doctor did not get this substance out, and the case is now in a far less favorable condition for a second operation.

In the after-treatment of these cases, when pain is severe, a dressing of extract stramonium and liquid vaseline will be found valuable, and as well phenacetin in powder dusted into the wound.

OATMAN, ST. LOUIS: POINTS TO BE REMEMBERED IN RECTAL SURGERY. (*St. Louis Medical Era.*)

1. Remember, To operate upon all cases of fistula where there is sufficient vitality or nutrition to heal the wound, always dividing the fibrous membrane at the bottom of tract and packing wound to the bottom, for the purpose of healing by granulation.

2. Remember, To always open abscess early to prevent fistula in ano.

3. Remember, If you operate on fistula, in a tubercular patient, give him the benefit of a doubt.

4. Remember, That you should never fail to examine your patient thoroughly, for small arms leading out from the main track, and examine for an associated stricture which may be the cause of the fistulous tract.

5. Remember, That you are never to cut the sphincter but once in any operation, and be careful to warn your patient of the danger of incontinence.

6. Remember, That you are to confine your patient in bed, not trusting to the care of a nurse (exclusively). Tuberculous cases should be an exception to the rule—giving them moderate exercise and fresh air.

7. Remember, That physiological rest is the first principle in the cure of all diseases.

8. Remember, That varicosed veins are not hemorrhoids until they have passed through the stage of inflammation and plastic exudation.

9. Remember, That hemorrhoids that don't protrude don't demand an operation, as a rule.

10. Remember, That uncomplicated hemorrhoids have no pain.

11. Remember, That there is a differential diagnosis to be made between hemorrhoids, prolapse of the bowel, and polypus.

12. Remember, That the ligature is simple in application, free of danger, and certain in its results.

13. Remember, That you are to transfix the base of the large pile, and not the small one, cutting off two thirds, and tieing tightly to prevent hemorrhage.

14. Remember, That there are two forms of external piles; one you can cut off, the other you can ligate.

15. Remember, That you are always to remove all complications at the time of removing the hemorrhoids.

16. Remember, That you are to remove all external tagis during the operation for internal hemorrhoids.

17. Remember, The capillary or strawberry pile, for danger may come to the lot of your patient.

18. Remember, The Mathews tampon, which is simple in construction and easy in application.

19. Remember, Hysteria to be a disease when applied in rectal surgery, having for its causes a change in quantity or quality of blood and a change in the solids consequent thereon.

20. Remember, The reflexes in diseases of the rectum, for you will find a pathological cause somewhere along the telegraphic line of the lumbar or sacral plexus.

21. Remember, That an operation on disease in the contiguous organ will relieve the protean symptoms in the rectum.

22. Remember, In connection with the reflexes the small fistulous tract beneath the mucous membrane, the sensitive nerve, the denuded epithelium, and nothing but patience and perseverance by the use of the probe will reveal the organic lesion in question.

23. Remember, The irritable ulcer or fissure, located on the sphincter muscle, caused by a denudation of the epithelium, does not heal for the want of physiological rest.

24. Remember, Divulsion cures it.

25. Remember, Ulcers in the rectum are oftener caused by constipation, and a locked-up liver action, than any other known cause.

26. Remember, That ulcers in the rectum are not caused, as a rule, by dysentery.

27. Remember, That when you give them physiological rest and remove the cause, or pull out the nail, as Prof. Carpenter has so thoroughly impressed upon your mind, they will heal.

28. Remember, The sigmoid flexure as a receptacle, and liable to ulcerations, which you may cure by medicines of a disinfecting and cleaning nature, to be used through a Wales bougie.

29. Remember, The classification of stricture: Acquired, the result of inflammation; congenital, which is not a stricture proper, but an atresia, the result of an arrest of development.

30. Remember, That there are simple tubular or valvular strictures of a benign nature, that are amenable to treatment by gradual dilatation, to be used indefinitely, or we might say as long as the patient has an existence.

31. Remember, One half of all the strictures in the rectum are syphilitic.

32. Remember, That in all malignant strictures of the rectum nothing short of colotomy, inguinal preferred, will spare your patient's life for a short time; and no operation, only when suggested by the patient.

33. Remember, Syphilitic stricture in its incipiency should be treated constitutionally.

34. Remember, Tuberculosed strictures, where the lungs are badly involved, are to be let alone.

35. Remember, That all strictures, no matter where located, are the result of inflammation, with plastic effusion or infiltration.

36. Remember, That prolapsus ani is a disease confined more especially to childhood, and where it occurs in the adult it is the lingering result of childhood misfortune.

37. Remember, That you may mistake prolapsus for hemorrhoids, and only a clear understanding of an anatomy of the parts will lead you to a differential diagnosis.

38. Remember, You are to select Mathews' method for relief in the adult; palliative astringents with strapping for children.

39. Remember, Pruritus ani is the result of nervo-reflex actions and filthy habits.

40. Remember, That it is the most formidable of all diseases, as far as cure and treatment are concerned.

41. Remember, That you should relieve the cause, and by the use of campho-penique and temperance or total abstinence from the use of alcoholic drink and tobacco, you may cure the disease.

42. Remember, The rules that you are to be governed by, quantity and quality of blood, physiological rest, thorough asepsis and antisepsis.

THOMPSON, MR. HENRY: IMPERFORATE ANUS WITH RECTO-VAGINAL FISTULA IN A PATIENT NINETEEN YEARS OF AGE. (*Lancet; Medical and Surgical Reporter.*)

The patient was sent to the Hull Infirmary on September 25, 1893. The mother stated that the girl was a week old before the nurse found out that there was any malformation. When five or six weeks old, Mr. Thompson, of Beverly, "tried to make a proper opening," but failed to do so. When fourteen months old she was brought to the Hull Infirmary and examined. Nothing was done, but the mother was advised to bring her again when fourteen or fifteen years old. During the whole of her life of nineteen years the girl has never had control over defecation, but during childhood she had relief without the administration of an aperient, although the mother stated that up to admission to the Hull Infirmary she had never known her to pass a "formed" motion. Seven or eight years ago she began to suffer from attacks of "sickness and purging." At first these attacks only occurred at intervals of three or four months, but latterly there had been only, as a rule, an interval of a month or so.

During these attacks she had stercoraceous vomiting and constant passage of fluid motions. The patient had never menstruated, but had always been an active, intelligent girl. On admission to the hospital she appeared more like thirteen instead of nineteen years; there was an absence of an anus, its site was marked by a cicatrix.

The hymen was absent, the vagina capacious. Just within the vagina on its posterior surface a round aperture could be felt communicating with the rectum, which was felt to be loaded with a huge accumulation of feces, which probably extended through the whole of the large intestine. On October 7th the patient was anesthetized, the lower bowel cleared, and the following operation performed: A combination of Mr. Whitehead's for

severe hemorrhoids, and Lawson Tait's splitting operation for ruptured perineum. The rectum being plugged through the vaginal fistula, a vertical incision was made from the apex of the perineum to the tip of the coccyx and continued down to, but not at first dividing, the mucous membrane of the rectum. The rectum was then freed for some distance from its attachments so that it bulged into the upper part of the wound like the end of a sausage. Anteriorly each side of the vaginal fistula was split and the posterior wall of the vagina was dissected up from the anterior wall of the rectum for some distance beyond the upper end of the fistula.

After continuing the original vertical incision through the mucous membrane of the lower end of the rectum seven sutures were inserted, attaching the edges of the freed rectum to the edges of the skin, so as to form an anus. These were not tied until the vaginal fistula had been sutured. Commencing at the apex of the vaginal fistula a small threaded, right-angled needle was passed through the mucous membrane on one side from before backward, then catching the other side from behind forward so as to bring together the anterior one and a half inches of the fistula. A strong handled threaded curved needle was then passed, first within the split edge of the fistula on one side and then within that of the other side. This was done in three places and all the stitches then tied, first those of the vaginal fistula, then those around the new anus. All that remained to be done was the insertion of numerous superficial stitches in the perineum and behind the new anus. The result was good, except the difficulty in expelling the bowel contents, that power having never been developed, but abdominal massage with aperients have produced an improvement, and it is probable that the muscular power will develop, and she may be able to have natural evacuations without any aid.

Brown, Dillon, New York: Three Cases of Malformation of the Rectum and Anus. (*Archives Pediatrics*, No. 124.)

Case 1 occurred at the New York Foundling Hospital in 1885, during my service as resident physician. The anus was apparently normal, and ended in a *cul-de-sac* which was separated by a thin

membranous partition from the lower end of the rectum. The gut was easily made pervious by an incision through the membrane, and a large amount of meconium was discharged from the distended bowels. As a result of the operation there was a stricture of the rectum at the point of malformation. This was easily kept open by the finger, but it was a year before the digital dilatation could be dispensed with.

Case 2 was seen with Dr. J. A. McLoughlin on May 6, 1890. The child was a boy, and had no other abnormality. He was forty-eight hours old when first seen, and was then in a state of collapse with all the signs of acute intestinal obstruction—intense pain, violent straining, distended abdomen, and constant vomiting. There was absolutely no trace of an anus, the perineum being perfectly smooth with the exception of a slight ridge along the line of the urethra and posterior to the scrotum. This had been mistaken, very naturally, by another physician as the deformed anus, and, on attempting to open it, he succeeded in entering the urethra and causing an infiltration of urine, which extended to the perineum, the scrotum, the base of the penis, and as far up as the lower part of the abdominal walls.

Using the coccyx as a guide, an incision about one and a half inches in length was made just anterior to it, and after dissecting down for an inch and a half, keeping close to the hollow of the sacrum, the small pelvic outlet could be felt (fitting over the fore-finger like a ring), and through this an indistinct bulging mass was made out when the child made expiratory efforts. This was punctured with a Cabot empyema guide, an incision made, and a large amount of meconium evacuated. The wound was thoroughly cleaned and the bowel drained by the means of a long rubber tube, but the infant never rallied, and died six hours after the operation. The autopsy showed a complete absence of even a trace of an anus, and the rectum ended in a blind pouch, which was attached to the upper and left side of the bladder by a more or less flattened band. This specimen was exhibited at the meeting of the Pediatric Section of the Academy of Medicine on May 8, 1890.

Case 3 was seen with Dr. C. W. Bohmfalk on May 21, 1890, the infant being a boy thirty-six hours old. The deformity was, as far as could be determined, identical with that in the previous

case, and the rectal pouch was opened in the same way. The child made a rapid and uneventful recovery. However, it was necessary to keep the opening free by occasional dilatation with the finger, and we were preparing to obviate this, if possible, by excising the coccyx and bringing the gut down and stitching it to the external wound, when the parents sought further advice at one of the dispensaries, where they did a lumbar colotomy at once. The infant, however, made a good recovery, and was living and doing well two years later with an artificial anus in the side.

SENDLER: THE OPERATIVE TREATMENT OF HEMORRHOIDS. (*Centralbl. für Chir.; Am. Jour. Med. Sciences.*)

The papers recently published by Lang and Whitehead, in which they published simultaneously the results of an operation very similar in its character, which each unknowingly had performed, leads the author to report the operation he has performed for some time past, with a *resumé* of some of his cases. He performs the operation as follows:

After the usual preparations the chloroformed patient is put into the lithotomy position. The pile mass is then dissected up from the loose cellular tissue. It is then cut free through sound mucous membrane, the sphincter being carefully avoided, and after hemostasis the mucous membrane is united to the sound skin. If the pile is a large one, or there are many, it would be well to proceed step by step, and after the extirpation of each pile immediately place the sutures.

His after-treatment consists in the insertion of a drainage-tube covered with iodoform gauze and an aseptic dressing, when by means of a simple diet and opium the bowels are confined for five or six days, and then are only slightly moved. Generally after eight days the stitches can be removed and the patient can get up. His shortest cure was four days, the longest twenty-one days, or an average of fifteen days in bed. There was very slight pain after the operation, and no untoward symptoms. He lost no patients. All of his cases had been under observation for some time, and in none does he find any difference from normal in the functions of the sphincter or rectum. He claims for the operation speed and certainty, with no granulating surfaces of any moment.

GASTRO-INTESTINAL DISEASE.

DEANSELY, EDWARD, WOLVERHAMPTON, ENG.: THREE CASES OF PERFORATION OF GASTRIC ULCER, WITH REMARKS ON ITS OPERATIVE TREATMENT. (*Birmingham Medical Review.*)

Case 1. A female, aged twenty-three, was admitted to the General Hospital, Wolverhampton, under the care of Mr. Kough, on August 31, 1892, at 5 P. M., and died at 7.30 P. M. the same day.

The history, which after death was elicited from the mother, was as follows: She had complained of pain in the epigastrium and back after meals for a fortnight previously, but had not been known to vomit. On August 27th, two hours after a meal, while lying down she felt sudden severe pain in the belly, and vomited almost at once. She continued to vomit almost incessantly for the next four days. The bowels did not act till August 31st after an enema. She suffered severe constant pain over the whole abdomen.

On admission, the face was pinched, the eyes deeply sunk, pulse small, respiration purely costal and gasping. The abdomen was distended and tympanitic, except in the flanks, which were dull. The parietes were not rigid. Owing to the absence of the history, afterward obtained, some form of acute intestinal strangulation was diagnosed, and preparations were made for abdominal section; but death occurred before this could be carried out.

Post-mortem, the abdomen contained several pints of thin, whitish pus, with abundant flakes of lymph on the pelvis and flanks. The anterior wall of the stomach was adherent to the under surface of the liver by recent adhesions situated round a circular perforation the size of a threepenny-piece. Viewed from within, the perforation corresponded to the floor of a circular ulcer the size of a shilling, with a slightly thickened, smooth, round edge, situated two inches from the cardiac orifice, and one inch from the small curvature on the anterior wall of the stomach. There was no constriction of the stomach, and there were no other ulcers. The small intestines were glued together with recent lymph, but pale and not injected. Other viscera normal.

Case 2. A female servant, aged twenty-nine, was admitted to the same hospital, under the care of Dr. Malet, on June 1, 1893, in the afternoon.

The previous history was not fully recorded, but she said that she had suffered from pain in the epigastrium after food for a considerable time, and had complained of this to her mistress ten days previously. Her illness had begun very suddenly, with intense pain in the abdomen an hour or two after a hearty supper, three days before her admission to the hospital. During the next three days she vomited incessantly.

I saw her with the house physician about eight hours after admission. She was then in a state of collapse, but quite conscious. The face was pale and anxious, the pulse small and feeble. The abdomen was universally distended and tympanitic, motionless during respiration, and rigid and tender to the touch. The history and symptoms pointed clearly to acute general peritonitis following perforation of a gastric ulcer. She died twelve hour after admission.

At the autopsy the abdomen was full of straw-colored fluid, with much thick lymph in the pelvis. There was a perforation, the size of a threepenny-piece, in the anterior wall of the stomach close to the cardiac orifice and just below the small curvature. It was only just possible to draw the stomach sufficiently downward and forward to have sutured the perforation through a median incision above the umbilicus. The site of perforation was adherent to the under surface of the left lobe of the liver by recent soft lymph. The stomach, after removal from the body, had a well-marked hour-glass constriction at the level of the perforation, which, on opening the stomach, was found to be the floor of an ordinary funnel-shaped gastric ulcer with a somewhat thickened edge. There were no other ulcers.

Case 3. I was called to see the servant of a private patient, a girl aged twenty-one, on October 21, 1893, and obtained the following history:

For one month previously she had suffered from pain in the pit of the stomach, usually beginning about fifteen minutes after food, and followed almost immediately by vomiting, after which the pain ceased. The pain began in the epigastrium, but was also felt in the back between the shoulders. This occurred

about twice every day. On October 21st she had dined at 1:30 on cold fowl and potatoes, and had no pain or vomiting afterwards. She did not have her usual meal at tea-time. At 8 P. M., while standing up peeling potatoes, she was suddenly seized with intense pain, beginning in the epigastrium and spreading all over the chest and between the shoulder-blades. She felt faint and short of breath, but was just able to walk to the kitchen and sit down; she then walked up stairs to bed. Her mistress gave her a little brandy, almost immediately after which she vomited. When first seen by me, an hour and a half after the attack, she was still in violent pain and very restless. The eyes were somewhat sunk and the pulse small and weak. The abdomen was not distended, but motionless, rigid, and extremely tender, especially in the upper part and epigastrium. She had begun to menstruate before the onset of the pain. She had been somewhat irregular for some months previously, but there had been no cessation of the menses. There was no pain over the lower part of the abdomen and nothing to suggest pelvic mischief, but no vaginal or rectal examination was made. Two tenths of a grain of morphia were given. About ten minutes later she vomited violently and brought up a considerable quantity of half-digested food of a light color. After repeating the dose of morphia the pain gradually became easier. On the following morning she was admitted to the hospital under the care of Dr. Malet, who concurred in the diagnosis of perforation of gastric ulcer and consequent peritonitis. On admission the peritonitis appeared to be general, there being general tympanites and tenderness, and the whole abdominal wall being rigid and motionless during respiration. The aspect was anxious, the pulse small, and the temperature 101°. The prognosis was considered extremely grave, and surgical intervention discussed but negatived. In spite of the unfavorable prognosis the girl made a gradual but uninterrupted recovery. She was kept moderately under the influence of morphia for the first few days and fed entirely by the rectum, nothing being given by the mouth till the seventh day, when a little milk was allowed and afterward gradually increased. The vomiting was not repeated. On the fourth day there was only slight abdominal pain on moving and on deep respiration, and abdominal breathing had begun to return. The bowels were

relieved by a simple enema on the second day, and on the fifth day a large offensive motion was passed spontaneously, after which the abdominal distension became much less. On the sixth day the abdomen was free from tenderness. No unfavorable symptom having appeared she was allowed to get up on the twenty-fifth day, and was sent to a convalescent home a few days later, free from all gastric symptoms and eating ordinary food. She has since returned to her work as a general servant, and when last seen, a week ago, appeared and felt quite well, though she had recently twice had some return of the old epigastric pain.

Remarks. The question of operating was discussed in each of the above cases. In the first an exploratory operation was decided on, but death occurred soon after admission before the operation could be carried out. The second case was considered too far advanced for operation, and death occurred twelve hours after admission. These two cases were admitted to the hospital—one four and the other three days after perforation—both practically in a dying condition. The third case was seen within two hours after the onset of acute symptoms, and admitted to the hospital about twelve hours later. The history and symptoms pointed unequivocally to perforation of a gastric ulcer into the general peritoneal cavity, and resembled in almost every particular those of the two preceding cases. Nevertheless, under purely medical treatment, she made a gradual but perfect recovery.

The question of operating for perforation of gastric ulcer must be decided by the possibility of diagnosis and by the prognosis, with and without operation respectively.

From a study of recorded cases it would appear that the diagnosis is generally sufficiently evident, at any rate in those cases in which perforation occurs into the general peritoneal cavity. Of the three cases recorded above, the diagnosis in Case 1 would have been quite obvious if the facts of the previous history, afterward obtained from the patient's mother, had been known. In Case 2 the diagnosis was made without difficulty and confirmed *post-mortem*. In Case 3 absolute verification was of course impossible, but the history and signs were so unequivocal as to render the diagnosis in the highest degree probable.

Again, out of eight cases (Barling, *Birmingham Medical Review*, September, 1893, three cases; Haslam, *British Medical*

Journal, November, 1893; H. Gilford, *British Medical Journal*, 1893, vol. i, p. 944; Taylor, *British Medical Journal*, 1886; Pinner, *Centralblatt f. Chirurgie*, 1893, p. 619; Kriege, *ibid*, p. 331,) which I have collected from recent medical literature (all, with one exception, since 1890,) in which abdominal section was performed, the diagnosis of perforated gastric ulcer, made before operation, was verified in five, and probably accurate but not verified in one (Mr. Barling's second case). In the other two (Mr. Barling's first case and Mr. Taylor's case) the diagnosis was only made in one case after death and in the other at the operation. In both these cases, however, the diagnosis of peritonitis was sufficiently clear to justify operation, although the particular viscus from which the peritonitis started was not evident. There is of course an obvious fallacy in judging from cases which have all been submitted to operation, namely, that usually only cases with a clear diagnosis have been selected. Nevertheless, I think it will be found that in those cases which are verified, not by operation but by *post-mortem* examination, the diagnosis during life is generally clear in those in which perforation takes place into the general peritoneal cavity. These, as was long ago shown by Brinton's statistics, are almost always cases in which the ulcer is situated in the anterior wall of the stomach, the most movable part of the organ, and therefore the least liable to previous adhesion. In two out of the three cases here published, and in six out of the eight cases referred to, the perforation was in this position. When, however, the perforation occurs on the posterior surface, the diagnosis is not only oftener obscure, but the lesser fatality oftener prevents verification.

Lastly, even when the symptoms point clearly to acute peritonitis consequent on perforation of one of the hollow viscera, the absence of previous symptoms may sometimes render it difficult to localize the lesion. Previous history, however, pointed clearly to the stomach in the great majority of the cases referred to above, and close inquiry would probably considerably diminish the number of cases of entirely latent gastric ulcer. On the whole it may be concluded that the diagnosis of perforated gastric ulcer is generally clearer than that of most forms of acute abdominal mischief.

The mortality of this condition without operation it is of course only possible to guess. Probably Mr. Barling's estimate of ninety-five per cent. is not too high. That recovery under purely medical treatment may, however, occur is shown conclusively by a case recorded by Fagge (*Medicine*, first edition, vol. ii, p. 244), in which the fact was verified by a subsequent autopsy two months later. He does not, unfortunately, state whether the ulcer was on the anterior or posterior surface of the stomach. Case 3, recorded above, is, I believe, another case in point, as conclusive as in the absence of an autopsy it can be. Nevertheless it must be admitted that medical treatment offers but a poor chance when perforation is accompanied by any considerable escape of stomach contents. Unfortunately, at present the mortality of cases of this kind treated by abdominal section is not much more encouraging, but of the eight cases referred to above three are claimed as recoveries. Of these, Mr. Taylor's case died two months after the operation from intestinal obstruction due indirectly to the gastric ulcer. Mr. Barling's third case has already been alluded to. The operation consisted merely in the opening of a collection of pus behind the stomach twenty days after the sudden onset of symptoms pointing to the perforation of gastric ulcer, presumably on the posterior wall, an operation of course not comparable in difficulty with that for the immediate treatment of a perforated ulcer with acute general peritonitis. Lastly, the only case which I have been able to find in which gastrorraphy has been performed with success for perforated gastric ulcer is that of Kriege, in which a small perforation of a chronic gastric ulcer near the cardiac orifice in a man aged forty-one was sutured sixteen hours after the onset of acute symptoms, and the man recovered after the formation and evacuation of a left empyema. In this case the amount of extravasation of gastric contents and consequent peritonitis were very slight and limited to the neighborhood of the perforation.

A very near approach to a successful issue, in which the patient only succumbed to complications on the 31st day, was made by Mr. Hastings Gilford, of Reading. In this, as also in two others out of the eight cases of operation, more than one ulcer was found *post-mortem*. In spite, however, of the bare possibility of recovery without operation and of the at present dis-

courging results of operation, an improved technique and habitually earlier intervention hold out a better prospect of success than purely medical treatment.

With regard to the method of operating, a study of the measures actually adopted in the published cases has led me to the conclusion that in most of them too much time has been spent on suturing the stomach, and too little on emptying it of its remaining contents and thoroughly purifying the peritoneum. In the ordinary position of the perforation, near the cardiac orifice, the difficulties of suturing are very great, and the patient is seldom in a condition to stand a prolonged operation. The first attention, after opening the abdomen above the umbilicus and verifying the perforation, should be devoted to emptying the stomach by a syphon-tube, introduced either through the perforation (as suggested by Mr. Barling) or through the esophagus. A second incision should then be made above the pubes, and the abdominal cavity thoroughly flushed with warm water introduced alternately through either wound. In no other way is it possible to purify thoroughly both the upper and lower parts of the peritoneal cavity. Finally, a drainage-tube should be passed to the bottom of the pelvic pouch and the gastric perforation shut off as completely as possible from the surrounding viscera by plugs of iodoform gauze, the ends of which, brought out through the wound, form an efficient drain. The security with which an abscess in a non-adherent liver may be both isolated and drained in this way, makes it probable that an opening into the previously emptied stomach could be treated not less successfully in a similar manner with a minimum expenditure of time, leaving, of course, a fistula, which might or might not require to be subsequently dealt with. It must be remembered that the patient is in danger of dying, not because she has a hole in her stomach, but because the contents of it are in her peritoneal cavity. The first and most important need is to remove those contents, and to provide for drainage. When this has been thoroughly done, to do more is generally to sacrifice the patient to the pursuit of an abstract surgical ideal.

For permission to make use of the above cases I am indebted to the courtesy of Mr. Kough and Dr. Malet, of the Wolverhamton General Hospital.

DEAVER, JOHN B.: APPENDICITIS IN CHILDREN. (*Philadelphia Polyclinic; American Medical and Surgical Bulletin.*)

All cases are classed as catarrhal, ulcerative, tubercular, and relapsing or recurrent. The onset of appendicitis is usually sudden, constipation is the rule. Pain at first is paroxysmal, resembling colic. It is referred to the umbilical and epigastric regions, and in seventy-two per cent. of all cases appears within twenty-four hours. Later it becomes continuous and is localized in the right iliac fossa in fifty-four per cent. of all cases. Vomiting is present from the first, becoming uncontrollable if the case does not yield to treatment. The vomited matter consists, first, of the contents of the stomach, later of bile. Ordinarily the vomiting of stercoraceous matter is indicative of acute intestinal obstruction, yet we see stercoraceous vomiting in advanced and hopeless cases of appendicitis.

The tongue is furred, and later in the disease becomes dry with the deposit of sordes upon the teeth. There is extreme thirst, with a temperature varying from 102° to 104° F. and a high pulse-rate; the bowels are usually confined; it is, however, not uncommon to have the disease ushered in with diarrhea. The presence of sick-stomach, diarrhea, and pain coming on suddenly, are suggestive of enteritis, the affection with which acute appendicitis in its incipiency is most likely to be confounded. As the affection advances the child frequently favors the affected side and lies with the thigh of the corresponding side flexed upon the abdomen. Frequency of urination is often a prominent symptom. Examination by palpation reveals general tenderness over the affected area, while the point of greatest intensity usually corresponds to the so-called McBurney point, providing the appendix occupies its most common position, arising from the posterior internal aspect of the base of the cecum.

When general peritonitis is present early, as in the perforative variety of the disease, notwithstanding the general abdominal tenderness, upon deep pressure a point in the right iliac fossa corresponding to the appendix can be made out, which is much more painful than any other point in the abdomen. Palpation also detects very decided resistance offered by the abdominal muscles of the affected side. In many cases an indurated mass is to be felt, which is circumscribed, or diffused, particularly in

the direction of the linea alba and of the pelvis. Superficial percussion in the early part of the disease yields negative information, while deep percussion, if the case steadily advances, will reveal dullness, and, later, flatness. Deep rectal as well as vaginal examination is not of much diagnostic value, early in the disease at least.

Suppuration is not always readily detected, as fluctuation is difficult to elicit on account of the unyielding abdominal wall, yet the author has seen it well pronounced many times. Edema of the overlying abdominal walls is of very great diagnostic value as indicating the presence of deep suppuration. If, associated with the presence of a mass in the right iliac fossa, there are decided chills, or even chilly sensations with sweating, it is quite evident that pus is present.

The affections with which appendicitis is most likely to be confounded in children are enteritis, involving all the coats of the intestine (entero-peritonitis); acute mechanical intestinal obstruction; perinephritic abscess; abscess of the kidney (especially floating kidney); psoas abscess; iliac abscess; abscess of the abdominal parietes; hip disease; hepatic and renal colic.

Prichard, A. W., Bristol, England: Intussusception. (*Bristol Medico-Chirurgical Journal*, March, 1894.)

First, conditions and probable causes: The enteric variety alone occurs in about 30 per cent. of all cases; the colic variety in 18 per cent.; the latter occurring most commonly in the descending colon and sigmoid flexure. The ileo-cecal variety is the commonest, forming 44 per cent. The ileo-colic variety occurs in about 8 per cent. of the recorded cases. It may be caused by any thing which interferes with the proper regulation of the rhythmical movement of the intestine, or increased excitement in one part from the presence of an irritating substance; also decreased or disordered intestinal movements from want of proper nerve control, as the curious phenomenon of intussusception of the dying. It is very common in children, more than half of the cases being under ten years of age, and is often more or less directly due to external violence. The prominent symptoms are: Pain, sudden and severe—intermittent at first, and then localized round the tumor; there is no regular premon-

itory symptom ; there may be diarrhea, which usually continues and in most cases is accompanied by a bloody discharge. Complete obstruction is extremely rare. Vomiting appears early ; tenesmus is generally very severe ; collapse is early ; the abdomen is flaccid, unless peritonitis has set in.

The most definite sign is a "sausage-shaped tumor," which, if found, is pathognomonic. It usually occupies the line of the colon, and is dull on percussion.

As regards treatment, in most acute cases about forty-eight hours is the limit of time during which we can hope to effect a cure by manipulations and injections, or both combined. Sloughing of the invaginated part and passage *per anum* of the slough is rare. Air or water, or a solid may be tried in the operation of reduction. The pressure of water three feet above the patient is about one and one half pounds to the square inch of intestine. Should reduction after laparotomy be impossible, an artificial anus can be formed by resection of the whole tumor and stitching ends to abdominal wall, end-to-end anastomosis after resection ; stitching the turned-in edge of the intussuscipiens to the contiguous surface of the intussusceptum, or make an artificial anus in the healthy gut above if the invagination be strangulated.

In discussion of this paper, Mr. H. T. Mole reported some experiments made *post-mortem* in reference to the distension of intestines in the treatment of intussusception. In each of the first five cases the abdomen was opened by a median incision from the xiphoid to the pubes, the rectum was then freed as low down as possible, and a long india-rubber tube connected with a glass funnel passed in at the anus and tied firmly into the lower bowel. Water in measured quantity was then poured into the funnel, and the height of this above the table on which the body lay carefully estimated.

In all eight experiments were made, which resulted in demonstrating that no damage can be done to healthy intestines by injecting fluid with a moderate amount of force ; that the ileo-cecal valve is easily passed in all cases ; that in no case could water be made to pass the whole alimentary tract, or even reach the stomach ; and that the part most likely to be damaged by distension was in every case the transverse colon, either at or close to the

splenic flexure, and before great distension of the small intestine had taken place.

Mr. Greig Smith stated that it was clear that an elevation of the injecting reservoir of more than three feet was not safe; that insufflation by bellows or injection by hand-pressure should not be employed, that prolonged distension under low pressure was more successful than the opposite.

Mr. Paul Bush reported a case of intussusception in a child four months old, in which a celiotomy was done on the second day, other means of reduction having failed. A mass of intestine was found, and by gentle traction on the small intestine, but chiefly by pressure on the distal end of the swelling, the intestine was slowly "shelled" out from below upward, when it was found that about five inches of the termination of ileum, with the ileo-cecal valve and vermiform appendix, together with the ascending and transverse colon, were invaginated into the descending colon and rectum. Only slight peritonitis was present, and the patient made a good recovery.

Cohen, S. Solis: Einhorn's Gastrodiaphane. (*College and Clinical Record*, January, 1894.)

I wish to call the attention of the Fellows of the College to the "gastrodiaphane" (exhibited before the College of Physicians of Philadelphia) devised by Dr. Max Einhorn, of New York, which consists of a small electric lamp fastened to a flexible stomach-tube with cords connecting it with a source of electric power and with a handle to make and break the current. Four storage cells having an electromotive force of eight volts, or an equivalent number (6) of freshly charged bichromate primary cells will operate it. The patient having swallowed two glasses (one pint) of cold water, the end of the tube is lubricated with glycerin and the instrument is then readily swallowed by a person accustomed to swallow the stomach-tube, and sometimes by those not accustomed to its use. The examination being made in a dark room, when the current is turned on, the contour and area of the stomach appear very plainly as a luminous red zone on abdominal wall. The advantage of this method is in determining the presence or absence of thickening in the anterior wall of the stomach, and in determining the exact position of the stom-

ach and the outline of the lesser curvature. It is exceedingly useful in diagnosticating between dilatation of the stomach and the condition termed gastroptosis or sinking of the stomach. I have used the instrument in many normal-sized stomachs, and in half a dozen cases in which diagnosis was in doubt. In one case it confirmed the diagnosis of dilatation where the ordinary methods of percussion were unsatisfactory, thus proving the presence of pyloric obstruction, although the cause of the obstruction was so situated as not to be manifest. In another case, with symptoms of carcinoma, and absence of free HCl, but in which a tumor could not be felt, the thickening of the anterior wall appeared very clearly on the abdomen as a dark patch in the midst of the zone of trans-illumination. In another case in which there was a question whether or not a tumor of the abdominal wall communicated with or was attached to the stomach, we were able to demonstrate that there was no direct connection.

The method has a limited usefulness in diagnosis, its advantage being that it is readily applied, and that within its limitations the information it gives is easily interpreted.

MORTON, T. G.: EXAMINATION OF VERMIFORM APPENDIX REMOVED IN THE INTERVAL OF ATTACKS. (*Atlanta Med. and Surg. Bulletin*, April, 1894.)

The tube, which is three and one eighth inches long, is firm and rigid, so that it can be held by one extremity in the horizontal position without bending in the slightest degree. The vessels of the peritoneal coat are slightly injected.

The lumen of the tube is narrowed, mucous membrane thickened and found covered throughout with a tenacious mucus.

Near the distal end of the appendix is found a hardened mass of inspissated mucus and feces one inch in length and one sixteenth of an inch in diameter.

The mucous membrane is everywhere injected, but most markedly at the distal extremity of the tube (for a space of one and one fourth inches), in which are seen several punctiform hemorrhages with two of considerable size (about one sixteenth by one fourth inch).

At the point of location of the plug of inspissated mucus and feces are seen two very small necrotic areas (about the size of a

pin's head) involving only the mucous membrane, and one of the same size and character one half inch from the proximal end of the tube.

Microscopical Examination. A specimen of the mucus placed under the microscope shows an abundance of pus cells with some red blood corpuscles.

A section of the tube shows thickening of all the coats, but particularly the mucous, enlarged blood-vessels, and in the hemorrhagic areas infiltration with red blood corpuscles.

Sherman, H. W.: Strangulated Inguinal Hernia—Gangrenous Intestine—Removal of Nine Inches of Gut: Recovery. (*Lehigh Valley Medical Magazine*, January, 1894.)

Patient, farmer, aged sixty-five. Hernia descended the day previous to admission to hospital, after a heavy lift, experiencing considerable pain at once. Hernia was irreducible, even under chloroform anesthesia. Full doses of morphine given.

Examination on admission to hospital showed left side of scrotum and left inguinal canal much enlarged; skin ecchymotic; excessively tense and doughy below; no vomiting. Operation under ether. An old omental hernia with a knuckle of gut was found forced down into sac, and constricted at internal abdominal ring. Intestine necrotic and excessively distended. Omentum exsected, with nine inches of gut, and a V-shaped piece of mesentery being removed with cautery. End-to-end anastomosis, catgut rings being used. Catgut was used to sew peritoneum, and external wound with a deep silver quill followed by a superficial silk suture. Patient reacted well; maximum temperature 99.8° F. Daily enemata of warm water for seven days, when he had the first formed stool.

Railton, T. C.: Prolapse of Meckel's Diverticulum (Omphalo-Mesenteric Duct). (*British Medical Journal*, 1893, i, 795; *Archives of Pediatrics.*)

The patient, aged eleven months, was admitted into the hospital with a small, smooth projection from the umbilicus about half an inch in length, an eighth of an inch in thickness, red in color, cylindrical, and evidently covered with mucous membrane. There was no aperture leading into the abdominal cavity to be

found. There was a foul discharge from the navel for some months after birth, but this had now disappeared. The projection was ligatured and cut off, thus removing all trace of the abnormality. The microscopical examination left no doubt that in this case a prolapse of Meckel's diverticulum had occurred.

GERMARIS: A FREQUENT MISTAKE BETWEEN DISEASES OF THE STOMACH AND INTESTINES. (*Times and Register.*)

In one third of the patients, especially women, complaining of disease of stomach, one finds no real disease, as dyspepsia or dilatation, for which they are often mistakenly treated.

The disorder, instead of being in the stomach, is seated in the large intestine, and consists of a pseudo-muco-enteritis—the result of a secretion of mucine.

The small intestine does not participate in this.

The disorder is produced by disturbance of the functions of the colon, gaseous fermentation, and dilatation.

The numerous products generally accompany the harder fecal masses.

The treatment is as follows: Evacuation of the intestine, relief of the pain by bromides of calcium or strontium or cannabis (but not by opium).

To give antiseptics as the salicylate, borate or phosphate of soda (but not by benzo-naphthol).

Diet will be nearly that of health, only small amounts of alcohol allowed.

MANTIGNEAU, J. J.: GASTRO-INTESTINAL ANASTOMOSIS. (*Jour. de Med. de Bordeaux; Brooklyn Medical Journal.*)

It would appear from the author's statement that very few operations of this character have been performed in France. He was able to find but fourteen cases which had been operated upon in that country. He further discusses different methods of operation.

Upon the whole, the method with absorbable bone plates, so popular in America and England, is preferred. The author replaces the decalcified bone plate of Senn by a plate prepared from the hoofs of oxen. These are sawn or cut out and disinfected by means of boiling water, or by a sublimate solution. The serous surfaces are approximated as when bone plates are employed.

Book Reviews.

Diseases of the Rectum and Anus. By Alfred Cooper, F. R. C. S., Senior Surgeon to St. Mark's Hospital for Fistula and other Diseases of the Rectum, etc., and F. Swinford Edwards, F. R. C. S., Surgeon to the West London and St. Peter's Hospitals, and Senior Assistant Surgeon to St. Mark's Hospital. Second edition. London: J. and A. Churchill, Publishers, 11 New Burlington Street.

Of the number of books published on diseases of the rectum and anus this is one of the most practical and best. The long connection of both the authors with St. Mark's Hospital, together with a large private practice, enables them to speak authoritatively on all subjects pertaining to this special class of diseases.

The book contains twenty chapters, making three hundred and eighteen pages of reading-matter, and is supplied with an excellent index. It is illustrated by a good number of engravings, and is on good paper and well bound.

One naturally turns to the chapters on Hemorrhoids and Fistula first, these being the two conditions that interest the surgeon most who does rectal practice. The chapter devoted to hemorrhoids is a little disappointing, especially that quite a good deal of a short chapter is taken up by discussing methods that are, or should be, obsolete in treating this disease, as (*a*) the application of nitric acid; (*b*) the injection of acids and styptics into the substance of the pile; (*c*) removal by means of the galvanic cautery; (*d*) igni-puncture by means of the Paquelin cautery, etc. All these so-called methods have been tried and found inefficient, and when compared to the clamp and cautery or ligature in the radical treatment of internal piles fall into insignificance. In regard to the use of the clamp and cautery the author says: "Several deaths from hemorrhage have been known to take place after this operation, so that we do not consider it as safe as the ligature."

The ligature is the plan suggested as the very best for the treatment of internal piles, by the distinguished authors, and the following words are used in relation to it: "The application of a ligature will be found suitable for ninety-nine out of every

hundred cases." These words should have some weight with those surgeons who still persist in using the clumsy, painful, and dangerous clamp and cautery plan.

Whitehead's method of removing hemorrhoids by excision is condemned for numerous and good reasons.

After giving cocaine a fair trial it is stated that it has acted very satisfactorily in those cases where, owing to thoracic disease, the administration of ether or chloroform is contra-indicated.

The method used is the subcutaneous injection and not the local application—the effects of which are counted *nil.* In the hands of most operators cocaine fails to meet the purpose in this operation just for the reason that the author incidentally mentions, viz., that a more prolonged operation than was previously contemplated may be found necessary.

The chapter devoted to Fistula-in-Ano is decidedly the best in the book, and especially that portion of it which treats of the horseshoe variety of this disease. Exception might be taken to the definition given to fistula, which includes the pathology of the same. The author says: "It (fistula) consists of a passage lined by granulation tissue and situated in or near the wall of the lower part of the rectum." If this statement was taken literally, then in the majority of instances no operative procedure would be necessary. If the passage was lined by granulation tissue union would take place by third intention, the union of granulations. The truth is that not only is granulation tissue wanting, but it is the most difficult thing to make it granulate. Hence it is that the plan of injecting these passages with irritants, such as iodine, etc., has proved futile. This tough, elastic, and hardened membrane resists all such methods to make it *granulate.*

From time immemorial it has been handed down, copied from one author by another, that it is absolutely necessary to find the internal opening of a fistula, and it is refreshing to read this statement from so high an authority: "As a general rule for diagnostic purposes no probing is necessary. The external opening can be seen, the track leading from it can be felt, and if an internal opening exists, as it does in the majority of cases, it should be detected by the finger in the bowel, and the speculum and probe should be used as little as possible." We could only

add a word to this most excellent advice, which would be: find the internal opening after you cut for fistula, and waste no time in finding it before.

In operating upon a horseshoe fistula special stress is given the advice not to consider it two separate fistulæ and thereby make the mistake of dividing the sphincter muscle twice, but to fully understand its conformation, and it will be seen that only one division of the muscle is necessary.

The drawings illustrating this very important point are very specific and plain. When it is remembered that fistulæ of this variety are the most difficult of all surgical affections to cure, this chapter, which is replete with good advice, should be read by all surgeons who attempt this work. If the book contained but this single chapter it would be worth many times the cost of the whole.

The chapter on Ulceration of the Rectum is inadequate and not commensurate with the profound knowledge of the authors. The advanced pathology of the day has taught us much on the subject of ulceration. In speaking of strumous or tuberculous ulceration, it would have been just as well in this latter day of pathology to have left off the term strumous. It is a well recognized fact that any tissue can become tuberculous, and that the cause is invariably the same, viz., the *tubercle bacilli*. Therefore it seems singular to read in this chapter the following sentence: "A form of *scrofulous* ulceration has been distinguished from the *tuberculous* by the fact that the solitary follicles are the seat of caseous degeneration, which is followed by ulceration and deposition of tubercle around the ulcers." Scrofula, in the light of modern investigation, is a misnomer, and the term should never be used to describe a *tuberculous* affection. The author says of tuberculous ulceration that it is seldom of primary origin, and that it occurs most often as a secondary process in persons suffering from pulmonary consumption. This declaration might be misleading. It must be conceded that the tubercle bacilli can effect a lodgment in any tissue, and that from the local spot further invasion or infection can take place. Many patients have tuberculous joints who are not affected with pulmonary consumption, and *vice versa*. Many have tuberculous rectums, and not tuberculous lungs. It is upon this accepted doctrine that such

joints are excised and such rectums curetted. General infection can take place from local infection.

In speaking of syphilis as a cause of ulceration of the rectum the author says: "Syphilitic ulceration is most often due to the disintegration of gummatous growths, and is therefore connected with the tertiary stage of the disorder. The opposite opinion of Gosselin must be regarded as quite untenable." It is pleasing to note that this is the opinion of two distinguished authors, who base their opinions not only upon theory but upon fact. The French school is quite responsible for keeping up this mistaken view of Gosselin, and until it is recognized that it is a mistake the correct treatment can not be afforded these unfortunate patients. Any one who has watched these cases, noting the interval of several years after infection and no external lesion is manifest, must be convinced. This added to the *nature* of the *gummatous infiltration* is unmistakable.

The other chapters in the book are equally of great worth, and no surgeon or physician should be without it. It is thoroughly practical, splendidly written, and is an authority upon all diseases rectal. We have seen fit to offer some criticism upon special points after a careful reading of the book, but it has been upon immaterial things. As was said in the beginning, it is one of the very best works published on this very important class of diseases.

A Manual of Nursing in Pelvic Surgery. By Lewis S. McMurtry, A. M., M. D., Professor of Gynecology in the Hospital College of Medicine, Louisville; Surgeon in charge of the Jennie Casseday Infirmary for Women; Gynecologist to the Sts. Mary and Elizabeth Hospital, etc. Morton's Pocket Series, No. 3. Louisville: John P. Morton & Company. 1894.

In these days of specialism, not only in medicine but in nursing, this little manual will serve an excellent purpose, for, as the author well says, "a general knowledge of medical and surgical nursing will not suffice for this work; but special knowledge and training are quite as essential for the nurse as for the surgeon." The work is a pocket edition of ninety-two pages, with special chapters upon the Preparation of Instruments and of the Patient; The Operation; After Operation; Complications, and notes upon Operations in Private Houses. It is neatly bound in red, and is produced in the usual excellence of this house, save in one place

where, perhaps through a mistake in revising proof, in speaking of emptying the tube (page 58), the sentence reads, "Preparatory to using the *tube* the nurse should always wash her hands carefully, etc.," when we take it *syringe* was meant. We commend the minutiæ given regarding the operation of catheterization, believing that much serious trouble often follows the performance of it without exposing and properly cleansing the parts. We take it that Douglas' pouch or *cul-de-sac* should have been used instead of Douglas' *space*, because more familiar. More comprehensive directions might be given in the chapter on dressings in regard to the material best to be used for that purpose. Excelsior butter-cloth is a cheese-cloth rid of its "sizing," etc., and simple sterilization suffices to make it ready for use.

The author states that "for a long time diseases peculiar to women have formed a specialty in medical science and practice." We are ready to admit this as a fact, but we take issue with him when he states in his "list of operative procedures belonging to pelvic surgery"—the gynecologist—that "operations for hemorrhoids and anal fissure" are in his domain. For many years diseases of the rectum has been recognized as a distinct specialty. In every large city in the Union there are two or three or four competent surgeons who devote their whole time and attention to this branch of work; they are not rectal specialists if they do a trachelorrhaphy or curettement, etc. And no more is a gynecologist a specialist, who operates upon hemorrhoids and anal fissure.

Lectures on Auto-intoxication in Disease, or Self-poisoning of the Individual. By CH. BOUCHARD, Professor of Pathology and Therapeutics, Member of the Academy of Medicine, and Physician to the Hospitals, Paris. Translated, with a Preface, by THOMAS OLIVER, M. A., M. D., F. R. C. P., Professor of Physiology, University of Durham; Physician to the Royal Infirmary, Newcastle-upon-Tyne, and Examiner in Physiology, Conjoint Board of England. In one octavo volume; 302 pp. Extra cloth, $1.75 net. Philadelphia: The F. A. Davis Co., Publishers, 1914 and 1916 Cherry Street.

This is one of the most useful and intelligent books that it has ever been our pleasure to read. The lectures are on subjects of the greatest importance to every practitioner of medicine. It is a recognized fact that putrefactive processes in the intestinal

canal and the development of physiological and pathological alkaloids play an important part in many diseased processes. These are fully explained by the author, and no intelligent physician can fail to profit by his knowledge. The chapter on Pathogenic Therapeutics of Typhoid Fever is worth volumes to the practitioner, and the one devoted to the pathogenesis of uremia clears up many points in regard to that much misunderstood subject.

Teratologia: Quarterly Contributions to Antenatal Pathology, with Reviews of the Current Literature of the Subject. By J. W. Ballantyne, M. D., F. R. C. P. E., F. R. S. E. Edinburgh: Williams & Norgate. No. 1. April, 1894.

This periodical is found upon our exchange table. Like Mathews' Medical Quarterly, it is devoted to a subject hitherto unrecognized in periodicals devoted exclusively to the study of the branches announced upon its title-page. With an author of Dr. Ballantyne's renown this work will certainly fill a need, and we can but wish for it the success it deserves. Number 1, containing sixty pages of reading-matter, starts out with an account of The Fetus Amorphous, with excellent plates illustrating it, and a dissertation upon Fetal Pathology in the Past; it also contains reviews and abstracts from current literature upon these subjects.

The Physician's Wife; and the Things that Pertain to Her Life. By Ellen M. Firebaugh. With portrait of author and 44 photo-engravings of original sketches. In one crown octavo volume of 200 pages. Extra cloth, $1.25 net. Special limited edition, first 500 copies numbered, and printed in photogravure ink on extra-fine enameled paper; bound in half-leather and vellum cloth, $3 net. Philadelphia: The F. A. Davis Co., publishers, 1914 and 1916 Cherry Street.

From the pen of a physician's wife this little book is interesting and attractive, portraying as it does not only the trials and vicissitudes of the wife but of the physician himself. It is an admirable little story, well written, and will afford many a pleasant hour in its perusal. Though written of the wives of country doctors it contains much of interest to all. The pen sketches scattered here and there through the work are very pleasing, and we have enjoyed the work no little.

Transactions of the American Pediatric Society. Fifth Session. Edited by FLOYD M. CRANDALL, M. D. New York: Bailey & Fairchild.

This society, though but six years old, has done some admirable work, and we are pleased to receive the transactions of its fifth annual session, held at West Point, New York, May, 1893. Among the admirable papers of special interest to the readers of the QUARTERLY may be mentioned "Proctitis in Early Infancy," Louis Starr, M. D.; "The Dietetic Treatment of Chronic Constipation in Early Infancy," L. Emmett Holt, M. D.; "The Medical Treatment of Chronic Constipation in Early Infancy," Charles P. Putnam, M. D.; "The Local Treatment of Constipation in Early Infancy," Leroy M. Yale, M. D.; "Gastric Neuroses in Infancy," Irving M. Snow, M. D.

An American Text-Book of the Diseases of Children. By American Teachers. Edited by LOUIS STARR, M. D., Philadelphia, assisted by THOMPSON S. WESCOTT, M. D., Philadelphia. Cloth, $7; sheep, $8. For sale by subscription only. Philadelphia: W. B. Saunders. 1894.

We regret that this most excellent work was received too late for review in the July issue. A thorough review will appear in No. 4.

Books and Pamphlets Received.

A Summer Woman's Magazine.—The mother of America's favorite boy hero, "Little Lord Fauntleroy," Mrs. Frances Hodgson Burnett, writes to the mothers of boys in the June issue of the Ladies' Home Journal upon "When He Decides," in which she points out to what extent mothers should influence their sons in regard to their choice of an occupation. Mrs. Amelia E. Barr sketches the mental implements of the modern women in an article on "Have Women Found New Weapons?" Mr. Frank Stockton takes the quaint "Pomona" through some ridiculously funny escapades in this installment of her "travels." Mr. Howells reaches the seventh installment of his autobiography, "My Literary Passions." The biography of the number consists of four sketches, with portraits, of America's favorite illustrators, Charles Dana Gibson, Albert B. Wenzell, Reginald B. Birch, and Frank O. Small. A practically illustrated article on a timely subject is Mr. John Gilmer Speed's explanation of "The Game of Golf for Women." W. Hamilton Gibson occupies an entire page with one of his out-of-door illustrations of "A Garden of Long, Long Ago." The editor discusses with a frank directness the question of social purity. Palmer Cox takes his inimitable Brownies on a visit to "The Goddess of Liberty," and the words and music of the song, "A Spanish Serenade," to which the prize of one hundred dollars was given in the Journal's Musical Series, are given. Mrs. Mallon describes what will be proper and newest in "Summer Evening Gowns" this season. Maria Parloa, who is in Paris in the interests of the Journal, describes "The Apartment Houses of Paris." A carefully-prepared article on the serving, canning, and preserving of "The Berries of Summer," by Eliza R. Parker, will prove valuable to housekeepers generally, and "Milestones in a Married Life" is charmingly instructive on the subject of wedding anniversaries. Frank O. Small has made for the issue an exceedingly dainty cover. Published by the Curtis Publishing Company, of Philadelphia, for ten cents per number, or one dollar per year.

It is the *personnel* of successes that interest us as well as the material fact. Much has been said about the man who has made The Cosmopolitan, also about Edwin Bok's power behind the Ladies' Home Journal; but aside from the connection of that gallant Confederate and finished scholar, General Basil Duke, the public has not been informed as to who is supplying the manifold requirements to get out so complete a literary success as The Southern Magazine. The associate editor is Colonel T. E. Spencer, a scholar ripe before his years; and the general management is under the direct charge of a young man, Sam Stone Bush. They already have the material assurance from the public that "nails" success.

SYMPTOMS.

The bullfrog yells to the boy quite small,
Who wades in the brook, "You'll drown!"
The sarsaparilla ad. asks us all
If we feel that we're all run down.
The air is balmy, the sky is clear,
The poets and birds now sing;
On the streets gay bock beer signs appear:
These are symptoms of coming spring.—*Truth.*

The Direct Examination of the Female Bladder with Elevated Pelvis. The Catheterization of the Ureters under Direct Inspection, with and without Elevation of the Pelvis. By Howard A. Kelly, M. D., Baltimore, M. D. Reprint from the American Journal of Obstetrics.

Hysterectomy by Morcellement and the Vaginal Route in Pelvic Operations, in place of Laparotomy or the Abdominal Method. By George J. Engleman, M. D., St. Louis. Reprinted from the Transactions of the Southern Surgical and Gynecological Association.

The Present Status of Our Knowledge of the Pathology of Pelvic Inflammation, with Special Reference to the Treatment of Pelvic Abscess. By Richard B. Maury, M. D., Memphis, Tenn. Reprint from the American Journal of Obstetrics.

Shortening the Round Ligaments vs. Ventral Fixation for Retroversion. By J. H. Kellogg, M. D., Battle Creek, Mich. Reprinted from the Modern Medical and Bacteriological Review.

Vaginal Hysterectomy for Carcinoma of the Uterus Performed by Enucleation without Hemorrhage. By Robert Reyburn, A. M., M. D., Washington, D. C. Reprint from the Medical News.

Enterorrhaphy; Its History, Technique, and Present Status. By N. Senn, M. D., Ph. D., LL.D., Chicago. Reprint from the Journal of the American Medical Association.

The Management of Foreign Bodies in the Air-Passages. By Max Thorner, A. M., M. D., Cincinnati. Reprint from the Transactions of the Ohio State Medical Society.

Annual Reports of the State Board of Health of Illinois, for the years ending 1889, 1890, 1891, with an appendix containing "Zymotic Diseases in Chicago, 1890–92."

The Non-Surgical Treatment of Ovarian Disease. By J. H. Kellogg, M. D., Battle Creek, Mich. Reprinted from the Modern Medical and Bacteriological Review.

Neuratrophia, Neurasthenia, and Neureatria; First Paper. By C. H. Hughes, M. D., St. Louis, Mo. Reprint from the Alienist and Neurologist, April, 1894.

The Therapeutic Uses of the Salts of Cesium and Rubidium. By Theodore W. Schaefer, M. D., Kansas City, Mo. Reprint from the Medical News, March, 1894.

Three Illustrative Cases of Abdominal Section. By Aug. Schachner, M. D., Ph. G. Reprinted from the American Journal of Obstetrics, Vol. xxix, No. 3.

Primary Syphilis and Gonorrhea in Children. By B. Merrill Ricketts, M. D., Cincinnati, O. Reprint from the Journal of the American Medical Association.

Laparo-Hysterotomy: Its Indications and Technique. By N. Senn, M. D., Ph. D., LL.D., Chicago. From the American Journal of Medical Sciences.

The Efficiency of Nature's Remedial Measures. By Edward von Dönhoff, M. A., M. D., New York. Reprint from the New York Medical Journal.

The Treatment of Typhoid Fever. By D. D. Stewart, M. D. The Physicians' Leisure Library, Geo. S. Davis, Detroit. Single copy, twenty-five cents.

A Bill to Establish a Board of Medical Examiners and Licensers for Regulating the Practice of Medicine in the State of Ohio. Drawn by L. C. Scott.

A Contribution to the Physiology of Sexual Impotence. By E. R. Palmer, M. D., Louisville. Reprint from the New York Medical Journal.

Recumbency in the Treatment of Potts' Disease. By John C. Shapps, M. D., Brooklyn, N. Y. Reprint from the New York Medical Journal.

The Treatment of Typhoid Fever. By Elmer Lee, A. M., M. D., Chicago. Reprint from The Chicago Medical Recorder for April, 1894.

Recent Investigations in Faradic Electricity. By George J. Engleman, M. D. Reprint from the American Journal of Medical Sciences.

Lecture delivered by Prof. Pinckney French, M. D., at Barnes' Medical College, St. Louis, Mo. Reprint from the St. Louis Medical Era.

Asepsis with Especial Reference to Abdominal Surgery. By Louis Frank, M. D., Louisville, Ky. Reprinted from the American Practitioner and News.

Non-Medicinal Method of Treating Chronic Constipation. By S. G. Gant, M. D., Kansas City, Mo. Reprint from the Medical Herald.

Remarks on Fermentative Dyspepsia. By Austin Flint, M. D., LL.D., New York. Reprint from the New York Medical Journal.

Excision of Cancer of the Rectum. By Andrew J. McCosh, M. D., New York. Reprint from the New York Medical Journal.

The Palliative Treatment of Hernia. By Jacob Geiger, M. D., St. Joseph, Mo. Reprinted from the St. Joseph Medical Herald.

Report of a Few Cases in Rectal Surgery. By S. G. Gant, M. D., Kansas City, Mo. Reprint from the Medical Herald.

The Practical Application of Trusses. By C. H. Guibor, M.D., Topeka, Kansas. Reprint from the Kansas Medical Journal.

Twentieth Annual Report of the Superintendent of the Cincinnati Sanitarium for the year ending November 30, 1893.

Tuberculin and the Lung Cell. By Charles Denison, A. M., M. D., Denver, Col. From the Medical News.

Circular Saw Injury. By B. Merrill Rickets, M. D., of Cincinnati, O. Reprint from the Medical News.

The Place of Electricity in General Practice. By John Herbert Claiborne, M. A., M. D., Petersburg, Va.

Dr. Unna's Plaster Mills. By Horatio R. Bigelow, M. D., Philadelphia. From the Medical News.

Problems of Public Interest Concerning the Insane. By Orpheus Evarts, M. D., Cincinnati.

Excision of the Hip-joint in Tubercular Disease. By B. Merrill Ricketts, M. D., Cincinnati, O.

Intestinal Indigestion. By Thos. Hunt Stucky, M. D., Louisville. Reprint from the Medical Mirror.

Therapeutic Notes. Vol. I, No. 1. Published by Parke, Davis & Co., Detroit. February, 1894.

Gold in Therapy. By E. A. Wood, M. D. From the New York Medical Journal.

Report of the Tarpon Springs Irrigation and Development Company.

A skeleton key—Gray's Anatomy.—*Truth.*

Notes and Queries.

Labor Saving.—The American Medical Publishers Association is prepared to furnish carefully revised lists, set by the Mergenthaler Linotype Machine, and printed upon either plain or adhesive paper, for use in addressing wrappers, envelopes, postal cards, etc., as follows:

List No. 1 contains the name and address of all reputable advertisers in the United States who use medical and pharmaceutical publications, including many new customers just entering the field. Price, $1.25 per dozen sheets.

List No. 2 contains the address of all publications devoted to Medicine, Surgery, Pharmacy, Microscopy, and allied sciences, throughout the United States and Canada, revised and corrected to date. Price, $1.25 per dozen sheets.

The above lists are furnished gummed, in strip form, for use on the "Plymouth Rock" mailer, and will be found a great convenience in sending out advertising matter, sample copies, and your exchanges. If you do not use a mailing machine, these lists can readily be cut apart and applied as quickly as postage stamps, insuring accuracy in delivery and saving your office help valuable time.

Send for copy of By-laws and Monthly Bulletin. These lists will be furnished free of charge to members of the Association. Charles Wood Fassett, Secretary, St. Joseph, Mo.

The American Medical Publishers Association.—The annual meeting of this Association will be held at White Sulphur Springs, West Va., Friday and Saturday, August 3 and 4, 1894. The annual dinner will be given in the evening of the first day. A number of practical papers are being prepared, bearing upon subjects of interest to every one engaged in medical publishing. The above dates have been selected as a time when most business men can best spare a few days for a pleasure trip, and reduced rates having been secured at the hotels for members and their families, it is hoped that this meeting will be one of congeniality as well as of business interest.

Old Point Comfort.—Old Point Comfort is one of the most celebrated resorts in America. Famous in war as possessing the strongest fort in the land, and as being the scene of conflict by land and sea, it is hardly less famed in peace as a fortress of health, and the Mecca to which fashion and society turn for rest and recreation. The location of Old Point is the source of all its fame. It is situated on the border which divides the North and the South, and the peculiar surroundings lend a soft, Southern coloring to its climate and temperature.

Dr. William Pepper, for many years provost of the University of Pennsylvania, resigned that office April 23, 1894. He felt that the great growth of the University during his administration demanded the undivided efforts of the provost. He, however, will continue to hold the professorship of medicine. Dr. Pepper signalized his retirement from office by a contribution of $50,000, that will be applied to the extension of the University hospital buildings.

Dr. Emory Lanphear, for many years editor of the Kansas City *Medical Index*, has resigned the chair of Operative Surgery and Clinical Surgery in the Kansas City Medical College, and has removed to St. Louis. He makes the change in order to become Professor of Surgery in the St. Louis College of Physicians and Surgeons.

The 1894 announcement of the Marion County Medical Society, which meets in Indianapolis, Ind., weekly, from April 3d to June 26th, was duly received. Dr. W. N. Wishard is President, and Dr. F. C. Heath, Secretary.

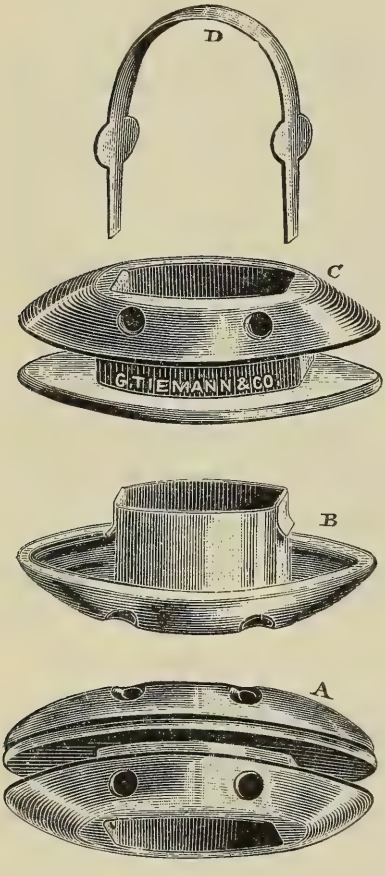
A New Orificial Journal.—A new medical journal has been published in Paris, devoted to orificial medicine. It is edited by M. D. Magitot, and is to be known as the *Revue Mensuelle de Stomatologie.*

Dr. Joseph M. Mathews, the editor of this journal, was elected President of the State Board of Health of Kentucky at its last regular session.

New Instruments.

GASTRO-ENTEROSTOMY MADE WITHIN TWO MINUTES WITHOUT SUTURE, LIGATURE, OR FORCEPS, WITH A MODIFICATION OF THE MURPHY BUTTON. BY H. O. WALKER, M. D., DETROIT, MICHIGAN.

The accompanying figures represent the modification of the Murphy Button which I have had made for lateral anastomosis.



First, The Button by its length, two and one half inches, meets the objection that has been raised that the round button does not make a large enough opening.

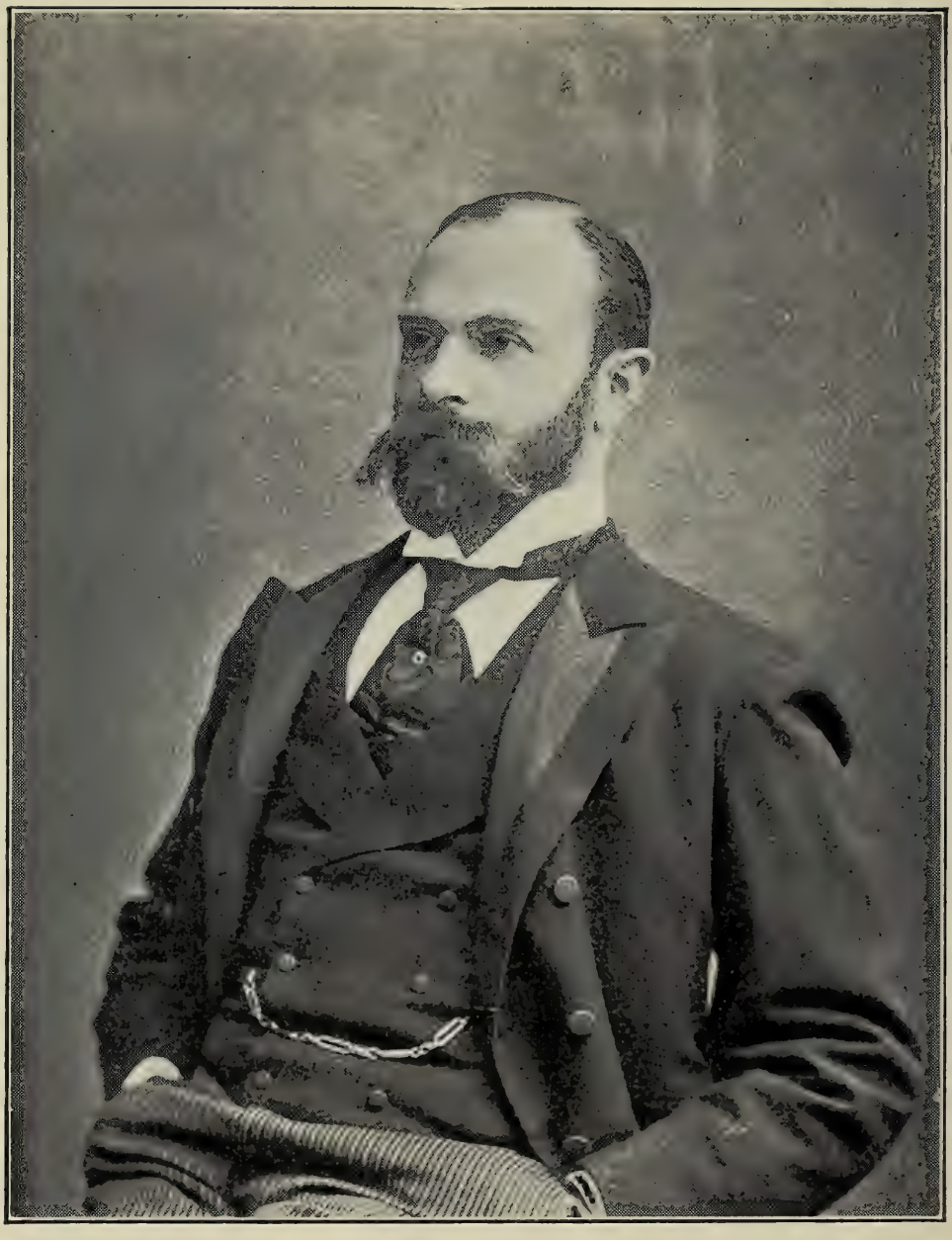
Second, The conical ends permit of its introduction through a smaller slit in the intestine than does the round button, acting while being introduced as a dilator, on the same principle that a conical sound does in stretching a stricture.

If the openings in the intestines to be approximated are carefully made they will fit closely, without puckering, around the central tubes, doing away with the necessity for the use of a puckering thread, making an absolutely smooth surface for approximation.

The buttons can be made of various sizes to suit the operation to be made. In the event that the opening by accident should be made too large, its size can be lessened by using a suture at each end of the incision.

June 1, 1894, I made a gastro-enterostomy on a dog weighing twenty pounds, within two minutes after seizing the stomach and intestines. The intestine was first incised and the lower half of button inserted, and then the stomach incised and the upper half introduced, when the approximation was quickly done.

A indicates the button closed, B the upper half, C lower half, and D key for unlocking button.



F. SWINFORD EDWARDS.

MATHEWS'
MEDICAL QUARTERLY.
"ALIS VOLAT PROPRIIS."
Vol. I. OCTOBER, 1894. No. 4.

Original Contributions.

PHYSIOLOGICAL REST IN THE TREATMENT OF PROLAPSE OF THE RECTUM.

BY JOSEPH D. BRYANT, M. D.,
NEW YORK, N. Y.

[Written for MATHEWS' MEDICAL QUARTERLY.]

"Is there any thing you can do to give me ease? I do not expect to be cured; I gave up all hope of that some time ago. I am fast becoming an opium fiend, and am not disposed to regret it either. Unless I can get some relief soon I had rather die; in fact I am often tempted to blow out my own brains, and may yet do so if unrelieved."

Thus was I addressed about two years ago by an intelligent, prosperous, and well-educated physician, who had invited me to visit him professionally at his temporary abode in this city. The exciting cause of this despairing statement was a complete prolapse of the rectum, which had promptly complicated an exhibition movement of the bowels, the same as it had done with each passage for many months before, notwithstanding the measures for relief that had been practiced by reputable surgeons at different times. One had but to observe the protrusion and witness the expression of distress to keenly appreciate the depth of the despair that environed the sufferer. The fecal matter attending each discharge was small, and was maintained at a semi-fluid consistency for obvious reasons. However, this measure did but little indeed to lessen the uncontrollable tenesmus that attended

the complete prolapse associated with each daily stool. On these occasions the overdistended and fretful sphincter grasped the protrusion with unsparing vigor and added its element of suffering to those already present. The prolapsed bowel became quickly congested, turgid, and quite general capillary oozing appeared on the surface. Tormina attended the tenesmus, and the facies of the sufferer bore evidence of the physical and mental misery that he was enduring. And when it is remembered that this was but a daily installment of the infliction, then indeed pity deepened to sorrow in the presence of such despair. After the stool the bowel was pushed back by the patient with considerable difficulty and attended with much distress, notwithstanding that the knowledge of the sufferer enabled him to call to his aid the influence of gravity and modified respiratory movements. Understanding from the patient that already two radical attempts at cure had been made by prominent surgeons without lasting benefit, and, too, that each of these operative procedures had been followed by a degree of sepsis well-nigh fatal, I said to him that I knew of no measure better intended to afford relief than that of turning aside the fecal current as a palliative means only, or for the purpose of avoiding the distress and danger of sepsis following a radical measure of cure. I regarded this advice as proper for the following reasons:

1. The sphincter ani was intact and retained the bowel within the pelvis, except during defecation, and then it prolapsed in spite of every effort of prevention.

2. An artificial anus, with all its objectionable features, was immeasurably preferable to the continuance of the suffering I had witnessed.

3. The rectal rest incident to the establishment of an artificial anus might in time cure the prolapse, or at all events render life less burdensome with it.

4. I regarded it as a wise preliminary step for the comfort of the patient, if further radical measures were attempted.

The patient promised to take the advice under consideration; and I presume he did, as I never heard from him afterward. However, inasmuch as I had under my charge in Bellevue Hospital at that time a patient suffering from a similar affliction, and on whom repeated operations for cure had been made by reputable sur-

geons without substantial benefit, I at once transferred my consideration and advice to the latter patient. This patient, however, was not so sorely afflicted as the former. The protrusion was of a less degree—about four inches. The sphincter was entirely paralyzed, therefore he did not suffer from its constricting influence during prolapse. The absence of sphincteric action permitted prompt prolapse; in fact the rectum was not retained in place at all except by recumbent posture, or by aid of direct pressure. This patient was first admitted to Bellevue Hospital in January, 1891. Good family history. Until three years before admission had been an excessive drinker of beer; had had typhoid fever, pneumonia, articular rheumatism, gonorrhea, and chancroids. No syphilitic history. For three years before admission had had diarrhea, tenesmus, attended with rectal prolapse of three inches in extent. Since admission to Bellevue Hospital (January, 1891,) this patient has been the subject of seven separate and distinct efforts at cure.

First Operation—September 3, 1891, Dr. Gallaudet operator. This operation consisted in the removal of a strip of mucous membrane and submucous tissue one and a half inches wide at each side of the entire length of the protrusion, and the union of the borders of the resulting spaces with sutures.

September 19, 1891, the following record was made: "Patient complains of slight prolapse on straining at stool. Does not come down in walking as formerly."

September 30, 1891, patient "discharged at own request, cured."

March 8, 1892, patient applied for admission, conditions as bad as before previous operation.

Second Operation—March 10, 1892, Dr. Hotchkiss operator. "Mucous membrane cauterized in linear direction in twelve places. Stricture of urethra found and dilated with sounds."

Third Operation—March 31, 1892, Dr. Hotchkiss operator. No description recorded other than that expressed by the single word "cauterization."

May 10, 1892, "wounds at anus completely healed; still great pain, and every morning has several discharges; more comfortable in the afternoon."

Fourth Operation—June 9, 1892, Dr. Gallaudet operator.

The following is recorded: "Sphincter stretched. Cautery applied in such a manner as to produce several long burns with the view of diminishing the lumen of the gut by the influence of cicatricial contraction." Recommended patient be kept in bed one month.

Fifth Operation—July 13, 1892, Dr. Gallaudet operator. "Cautery again applied to mucous membrane of rectum to produce cicatricial contraction."

September 20, 1892, "discharged from hospital at own request; improved."

Patient readmitted October 7, 1892, and remained in till December 31, 1892. No record during this time.

The patient applied again for admission during February, 1893. He was then suffering from alternating constipation and bloody diarrhea, and the act of urination was always attended by prolapse of the rectum.

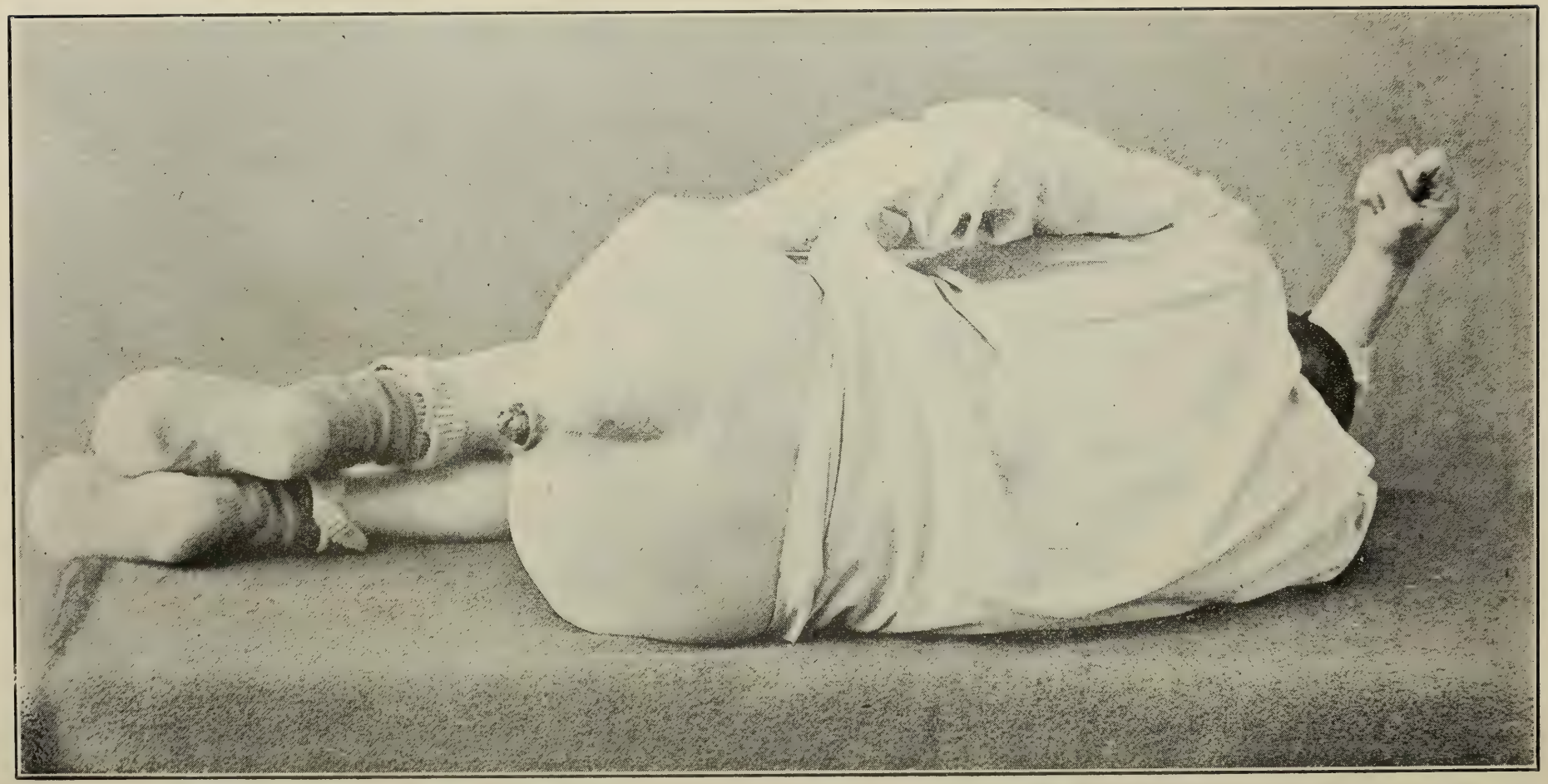
Sixth Operation—April 18, 1893, Dr. Samuel Alexander operator. The following is a brief statement of the technique adopted: "As there was no evidence of the presence of sphincters the gut was easily drawn downward its full extent, and while held at each side by artery clamps a wedge-shaped piece of tissue about two inches long was removed from each side of the protrusion, the edges sewed together and the gut returned to the proper place. An incision was then made on the right side of the anus about three fourths of an inch from the margin and one and a half inches in length. The upper and lower extremities of the wound were then joined with catgut. This caused a narrowing of the anus and aided in supporting the gut in position." No record of events following this operation can be found.

However, it is proper to say that the patient experienced no final benefit from it.

Seventh Operation — May 27, 1893, Dr. Bryant operator. At the time of the operation the patient's prolapse was not less than four inches, and only remained in the pelvis while he was lying down. Defecation, micturition, and the erect posture always caused the protrusion. Sphincteric action and the physical presence of sphincter were entirely absent. An artificial anus was made in the left groin, and the patient put in bed for two weeks. The gut was pulled firmly down before the open-

OCTOBER 6, 1893.

JANUARY 4, 1894.



MARCH 3, 1894.

ing was made into it to meet the usual reason for this step, and also to obviate any traction that the operation might exercise on the rectum. It was my intention at the time of making the artificial anus to quickly follow with radical measures addressed directly to the gut itself, but at the end of the two weeks just mentioned the patient was much improved, and at this time I left town for a brief period, and ere my return the patient had gone home for a visit, and therefore I did not see him again until about the middle of September following. He had then improved greatly in all respects. The protrusion was much less, diarrhea had almost ceased, sphincteric action had become well marked, and the general condition of the patient was very much improved. In fact the improvement was so pronounced that I decided at once to attempt no other measure of relief until this one had exhausted itself. While this remedy is called, somewhat euphoneously, the "physiological rest" measure, still, in this instance, a certain proportion of the fecal matter, about one fourth I think, continued to escape through the natural channel. During the entire treatment by me the physiological element of cure has been aided by small injections before a passage, etc., but nothing has been administered nor done during the time that had not been repeatedly tried before the making of the artificial opening and failed.

All the photographs presented were taken while the patient was straining to cause the completest descent of the bowel at that time. At the time of the reading of the paper the patient was presented to the members of the section. He was then unable to cause any portion of the gut to appear externally, even with vigorous straining.

In conclusion I desire to submit for your consideration the following propositions:

1. That the proper performance of the physiological functions of the rectum contribute greatly to the advancement of rectal disease and to the sufferings of the afflicted.

2. That the complete vicarious discharge of the feces through an artificial anus located in the sigmoid flexure reduces the physiological demands on each structure of the rectum to a minimum.

3. That the lessening of the physiological requirements is commonly in direct proportion to the diminution of the fecal flow through the rectum.

4. That the cessation or lessening of the fecal discharge *per rectum* exercises a palliative and curative influence on diseases of the rectum.

5. That in certain cases of obstinate rectal prolapse the formation of a vicarious channel for fecal discharge is justifiable, both as a palliative and curative measure.

6. That the preliminary establishment of such a channel for the purpose of cleanliness and the prevention of infection is justifiable in many grave operations for prolapse of the rectum.

7. That the dangers attendant on the formation of an inguinal anus are much less than those invited by the contact of fecal discharges with large operative surfaces of the rectum.

8. That the case just presented has been, without special risk, greatly benefited, and may be finally cured through the agency of an artificial anus.

9. That when cure takes place great care must be exercised thereafter, otherwise the prolapse will return.

54 West Thirty-sixth Street.

OUTERBRIDGE'S OPERATION FOR HEMORRHOIDS.

BY A. ERNEST GALLANT, M. D.,
NEW YORK.

[Written for MATHEWS' MEDICAL QUARTERLY.]

In a recent number of the *Provincial Medical Journal* (MATHEWS' MEDICAL QUARTERLY, Vol. I, page 326,) Robert Jones, of Liverpool, published "a simple method of treating the wound after excising hemorrhoids," and then says he "does not intend to use the cautery again."

Believing that simplicity in operative technique is the *sine qua non* to success, Dr. Outerbridge, since 1888, has given up the use of the ligature, clamp and cautery, etc., and pursued the following plan for the cure of hemorrhoids. His experience with this operation numbers from one hundred and twenty-five to one hundred and fifty cases of all degrees, varying from the simple external "tab" to the most severe case of internal hemorrhoids, with prolapsus of the whole "hemorrhoidal inch." As a part of the

general physical examination in every case which comes under his care, Dr. Outerbridge makes it a rule to explore the anal region. Later, when the patient is anesthetized, after having completed any other surgical procedure which the condition of the patient may call for, he rectifies the condition at the anus at one and the same séance.

The preparation of the patient (and this rule holds good in all cases for operation) consists of (1) the administration of a laxative on the second night preceding the day of operation, usually resulting in a thorough evacuation of the bowels on the following day and an interval of rest of from twelve to twenty-four hours. When the above plan is carried out the rectum will be found empty at the time for operation, and patients do not complain of pain from excessive peristalsis and rectal tenesmus; (2) in persons with excessive growth of hair it will be necessary to cut away the excess, but it will add much to the comfort of the patient if this can be avoided, as the short hairs project into the opposite buttock and cause needle-like pain and much irritation for two or three weeks after operation.

In view of the fact, so often overlooked by anesthetists, that the sphincteric reflexes are almost the last to be abolished, the degree of anesthesia must be more profound than for any other surgical procedure. With the subject thus anesthetized the sphincter ani must be fully dilated with the thumbs, when the hemorrhoidal mass will be brought into full view.

Thorough scrubbing of the anal region and washing the mucous membrane well above the operative field with tinctura saponis viridis and warm water appears to be the most efficient means for cleansing purposes. It is a practical impossibility to render mucous membrane aseptic, so that gross cleanliness is all that can be obtained.

For practical purposes in doing this operation we may divide the cases into two varieties:

1. Cases with only external "tabs" or with the more frequent arrangement of three tumor-like masses just inside the sphincter ani, usually considered most suitable for clamp and cautery or ligature. These may be dealt with in the following way: Grasp with a pair of thumb forceps, or insert the point of a tenaculum into the most prominent portion of the "tab" or tumor. Make

enough traction at right angles to the gut to clearly define the mass. Surround it with the blades of a pair of scissors (curved on the flat) pressed well toward the muscle, and with one or two cuts the diseased tissue is removed. This will leave an elliptical raw surface, the edges of which can now be united by a continuous catgut suture. Each distinct mass is amputated and sutured in the same way.

2. Those cases where the whole "hemorrhoidal inch" is dilated and ordinarily considered as most successfully treated by Whitehead's method. These may be handled as follows: Having thoroughly dilated the sphincter, the hemorrhoidal ring will protrude from the anus. With a pair of thumb forceps grasp a part of the mass, and with the curved scissors cut away a strip of mucous membrane and hemorrhoidal tissue, down to the muscle, following the line of the muco-cutaneous junction all round the lumen of the gut. A second or third strip may be removed whenever the size of the mass necessitates. If external hemorrhoids ("tabs") are also present, in order to prevent recurrence in that region, pruritus and the numerous discomforts usually following the operation as ordinarily done, a strip of skin down to the sphincter ani is removed in the same way. The free edges of the skin and mucous membrane are now brought together with a continuous catgut suture. A double stitch may be taken at two or three points in the circumference of the bowel to interrupt the sutures, and thus avoid the necessity of tying. Owing to the rapidity with which the diseased tissue can be removed and the suturing accomplished, the slight hemorrhage which occurs is at once controlled without the use of artery clamps or the necessity of ligating bleeding points. Should bleeding occur at any point immediately after suturing an extra suture at that point will at once control it. If during the removal of the mass any vessel bleeds excessively it can be quickly controlled by at once beginning to suture.

The excision of hemorrhoids after the manner described presents the following advantages:

1. Its extreme simplicity.

2. The instruments required are found in an ordinary pocket-case.

3. Primary union, and as a result little or no pain; no rectal

or vesical tenesmus; no retention of urine; no infection; no temperature; no sloughing, granulating mass; and a minimum amount of cicatricial tissue. All danger of secondary hemorrhage is avoided; the bowels are not confined before or after, doing away with all the unpleasant effects of opium and the discomforts of enemata; the use of tubes, packing, etc., is unnecessary; there are no sutures to be removed.

4. Time; the operation requires but a few minutes.

5. Short time in bed. In cases where no other operation has been done the patient is allowed to get up on the third day and attend to his ordinary duties.

6. Recurrence has not taken place.

35 West Fifty-third Street.

THE SIGNIFICANCE OF DIARRHEAL DISCHARGES AS A SYMPTOM OF RECTAL DISEASE.

BY S. G. GANT, M. D.,

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KANSAS CITY, MO.

[Written for MATHEWS' MEDICAL QUARTERLY.]

I have selected the subject above indicated for the reason that during the past few years so many patients came to me suffering from some serious rectal disease, wherein "diarrhea" was a prominent symptom, who had been treated for weeks and months by internal medication for chronic diarrhea, when the frequent stools were undoubtedly excited by a local disease situated somewhere in the terminal portion of the colon. That in these cases the diarrhea was due to local irritation alone was proven by the fact that all internal medication was discarded as soon as the disease had been located and a local one substituted, and invariably when it was cured there would be a cessation of the diarrheal symptoms. Only a few weeks ago a lady came to me for treatment

and gave the following history: She had been treated for more than three years for chronic diarrhea, supposed to be the result of some hepatic derangement; she had from fifteen to twenty liquid stools in twenty-four hours, which were now and then mixed with pus and mucus. They were preceded and followed by more or less pain, straining, and spasmodic contraction of the sphincters ani. On inquiry she further informed me that her rectum had never been examined, and that she did not think an examination was necessary at this time, for the diarrhea was the only thing that caused her any inconvenience.

I insisted upon the necessity of an examination. She finally consented, and I found a large ulcer one inch above the anus on the posterior wall of the rectum, that was evidently the source of irritation. The sphincters were immediately divulsed, the ulcer curretted, and a strong solution of silver nitrate applied to its base; for two weeks thereafter stimulating applications were made to it. At this time all the diarrheal symptoms had disappeared and she was discharged from the hospital cured.

I have treated a few cases wherein the diarrhea preceded and caused the local rectal irritation as a result of the frequent passage over the mucous membrane of irritating discharges excited from some disease situated higher up in the colon. In such a case as the one mentioned, if the original irritation is removed and the rectal disease remains uncared for, it becomes an independent source of irritation, excites peristalsis, frequent stools, etc., thus producing the same condition that formerly gave it birth. Any one of the following diseases, when located either in the rectum or sigmoid, will be accompanied by symptoms that might be mistaken for a simple "chronic diarrhea." For this reason I will deal with them separately, that I may more fully point out their diagnostic significance:

1. Chronic catarrh.
2. Stricture.
3. Ulceration.
4. Malignant disease.
5. Prolapsus.
6. Polypi.
7. Fecal impaction.
8. Villous tumors.

CHRONIC CATARRH.

Inflammation of the rectum and sigmoid is a frequent cause of diarrhea, for several reasons. In the first place, all irritating foods that have been hurried through other portions of the digestive tract are longer delayed in the lower portion of the colon. Second, the feces become hard and nodular, and are jostled from side to side during peristalsis against the sensitive mucous membrane. Third, the feces undergo certain putrefactive changes while still in the colon, thus exposing any unsound portion of the mucous membrane to the septic organisms contained therein.

STRICTURE.

A stricture from any cause that is sufficiently marked to produce a mechanical obstruction may cause diarrheal symptoms, for two reasons: First, when a stricture is of long standing there will invariably be more or less ulceration at or above the constriction that exposes the terminal nerve filaments to any irritating substances; as a result undue peristalsis is excited, causing frequent stools; in the second place, the liquid feces are readily discharged through the constriction, while firm and well-formed feces are unable to pass and accumulate just above it and become hard and irregular in shape and smeared over with a glary mucus. At frequent intervals this mass presses down upon the stricture, producing a sensation similar to that felt before stool; the sufferer goes to the closet and endeavors by continued straining to empty the bowel, but is unable to do so; the mass then acts as a valve, rises and falls each time, exciting renewed peristalsis which extends upward along the entire intestinal canal, causing the immediate discharge around the mass of any fluids contained therein. As a result of this abnormal condition these sufferers spend most of their time in the closet straining, and the bowel is being constantly squeezed dry of every thing, barring the impacted mass. One of these patients once remarked to me that every thing she ate seemed to be immediately converted into liquid and passed right through her.

ULCERATION.

In point of frequency as a cause of diarrhea, ulceration comes next to "catarrh." All who have done very much rectal work

must have observed the frequency of diarrhea as a symptom of ulceration of the rectum and sigmoid. Whenever the ulcer becomes irritable and very sensitive, any little particle of fecal matter becoming lodged within it, or the passage over the same of any irritating discharge, will prove sufficient to excite frequent and prolonged peristalsis, resulting in much straining and frequent stools. This I have seen demonstrated many times.

MALIGNANT DISEASE.

Diarrhea constitutes the most troublesome symptom that we have to deal with in the treatment of malignant disease of the lower portion of the colon, and the straining and pains which these sufferers have to stand is pitiable to behold, especially in the later stages of the disease. It has only been a few weeks since I had a lady brought to me suffering from a cancerous stricture of the rectum with the above symptoms, who had been treated for diarrhea for more than eight months, and a rectal disease had never been suspected.

PROLAPSUS.

Cases of prolapsus and invagination of the rectum and sigmoid have been mistaken and treated for chronic diarrhea on account of the frequent discharges of large quantities of mucus, as is the case when either of these conditions is present.

POLYPI.

Polypi when located either in the rectum or sigmoid act as a source of irritation and excite an abnormal secretion of mucus, which is discharged at frequent intervals and may be mistaken for a chronic diarrhea from other causes.

IMPACTION OF FECES.

It is a well-known fact that diarrhea is sometimes a symptom of fecal impaction, for the reason that well-formed feces can not pass the impacted mass, which acts as an irritant, excites peristalsis, and causes the liquid portions of the feces only to be discharged around it at frequent intervals.

VILLOUS TUMORS.

The leading symptom of a villous tumor is the frequent dis-

charges of large quantities of mucus that resemble very much the white of an egg.

Pathological Anatomy. The pathological anatomy in cases of chronic diarrhea varies in appearance very much, dependent upon the disease which produces it, as well as the length of time it has existed. When diarrheal symptoms are the result of a *prolapsus, polypi, villous tumors, colitis, proctitis,* or an *impaction,* the mucous membrane will appear congested, and will be smeared over with a thick, glary mucus, pus, or both, and when they are not corrected the membrane soon loses the smooth, velvety appearance, becomes much thickened, indurated, and firmly attached to the sub-mucous tissues, sometimes forming long, tubular stricture. When due to *ulceration, stricture,* and *malignant* disease, the mucous membrane in the earlier stages of the disease presents an appearance very much like that referred to above, but when the ulceration begins to extend it soon loses that smooth feel and appears ragged and irregular to the touch, and when a stricture has formed, no matter whether it be malignant or not, ulceration will almost invariably be present at the point of the constriction as well as above and below it. In many cases there will be a peri-proctitis which may terminate in an abscess and fistula. The entire rectal wall will be very thick, hard, and firmly attached to the neighboring tissues and organs. The finger introduced into the bowel will come into contact with many irregular-shaped nodules, cavities, or cicatricial bands, and when passed within the constriction a sensation is felt similar to that of a strong rubber band placed around the end of the finger.

Symptomatology. The pain, tenesmus, and frequent stools are undoubtedly the most annoying symptoms that these sufferers complain of, and they vary considerably; in one case they will be mild, in another severe, dependent both upon the disease and the extent to which it has progressed. When the symptoms are due to *polypi, villous tumors, prolapsus, impaction* of *feces, chronic colitis* or *proctitis* the symptoms will be very much alike, that is to say, in all probability there will be from six to ten stools daily, accompanied by a smarting, burning pain, tenesmus, and eversion of the mucous membrane, which will be congested. When either a prolapsus, polypus, or villous tumor is present, in addition to the above symptoms, the patient will complain of something protruding from the anus.

Character of the Stools. They are always liquid or semi-solid; the majority of them will be made up largely of mucus, which will be mixed now and then with pus and blood when ulceration has commenced; the remainder of the stools will consist of liquid and semi-solid feces. Sometimes these patients complain of *pain* and *tenesmus* over some portion of the intestines or colon, to be followed on the morrow by frequent discharges of mucus and shreds, and sometimes almost *perfect casts of the bowel*, which at first appears to be the mucous membrane itself, but when pulled apart proves to be a thick exudation that has formed on the membrane that resembles the false membrane seen in diphtheria. This variety of inflammation is very obscure at the present time; it is thought to be of nervous origin, and I have been in the habit of diagnosing such cases as *membranous enteritis.* When the mucous membrane is irritated from any of the diseases mentioned, the sphincters ani will alternately contract and relax, causing the patient much annoyance, and when the exciting cause remains for any great length of time they become tired out and remain passive, necessitating the wearing of a napkin constantly to prevent the escape of the feces. In the earlier stages of *ulceration, stricture,* and *malignant disease,* one or all of the symptoms just described may be present, and they become aggravated as the disease progresses, and in addition to them there will be a variety of reflex disturbances of the neighboring organs that are liable to be mistaken for ovarian neuralgia, diseases of the uterus, prostate, or other pelvic diseases. There will be pains in the back, abdomen, and down the limbs, but the most annoying symptom of them all is the almost constant straining and never-ceasing desire to empty the bowel, which many times is a physical impossibility in so far as the solid feces are concerned, for when a stricture is present, no matter whether it be malignant or not, the liquid feces are discharged through it at short intervals, while the solid portion accumulates just above it, and they are forced to leave the closet with the unsatisfied feeling that something still remains in the bowel that ought to come away. In all such cases the sphincters become passive, and the annoyance of incontinence is added to their sufferings. It is hardly necessary to call attention to the fact that these sufferers look worn out, have a sallow complexion, hollow eyes, are extremely nervous, and

that many of them are in the habit of taking morphine, chloral, or the bromides that they may get relief from the pain and tenesmus.

Diagnosis. It is easy to make a correct diagnosis of any of the diseases under discussion if one first gets a history of the case, to be followed by a thorough digital and visual examination of the rectum and as much of the colon as we can. Whenever there is any doubt as to the real conditions present, the patient should be placed on the table in a good light and the examination completed under chloroform. In *chronic catarrh* the mucous membrane will be congested, thickened, immovable, and smeared over with an abundance of a thick, glary, ropy mucus. A sweep of the finger around the rectal wall will readily detect the presence of *polypi*, for they are always attached by a long, narrow pedicle. A *prolapsus* will be recognized by the everted mucous membrane, the globular form of the tumor, the slit in its center, and the fact that not only one side but the entire circumference of the bowel is involved. When *ulceration* is present the mucous membrane will feel irregular and ragged to the touch; when a speculum is used the ulcers when located within four or five inches of the anus come into plain view. *Malignant disease* and *stricture* can be recognized by the diminution in the caliber of the bowel as a result of cicatricial bands, or from hard, nodular tumors, with ulceration at and above the point of constriction.

Consistence of the Stools. When extensive *ulceration* is present the stools will vary in frequency from four to fifteen a day, and will be almost entirely liquid for the reason that the food is not retained long enough within the intestinal tract to become firm. There will be frequent discharges of mucus mixed with pus and tinged with blood. Now and then, when the ulceration has encroached upon a blood-vessel the entire motion will be made up of clotted blood. In *malignant disease* and *stricture* the discharges resemble those of extensive ulceration, but we now have added to them small detachments of broken-down tissues, and in the later stages there will be more or less blood in every stool that becomes mixed with the mucus and pus, giving the discharge an appearance not unlike cold coffee grounds. The stools occur more frequently than when ulceration is present, and range anywhere from twenty to fifty in twenty-four hours.

Prognosis. The prognosis of *chronic catarrh, prolapsus, villous tumors,* and *polypi* is usually good, and a cure may be obtained in a short time. In *benign stricture* and *ulceration* it is good in so far as a fatal termination is concerned. There are many cases, however, that will require a long treatment, and some that we can not promise any thing beyond a fairly comfortable existence.

In *malignant disease* the prognosis is exceedingly unfavorable, and, unless the disease is recognized and removed almost at its inception, death will ensue in a few months. We can, however, prolong life from six months to three years and make them comparatively comfortable while they do live, if they will submit to a colotomy.

Treatment. Space forbids my giving in detail the treatment of the various pathological conditions that might give rise to diarrheal symptoms, so I will content myself by mentioning the more salient features. The first step is to search out the cause and remove the same, else all remedies given to arrest the frequent stools will be of no permanent benefit. The diet should be restricted to non-irritating, easily digestible foods, such as soup, soft-boiled eggs, pure beef juice, broiled steak, plenty of milk, etc. Regular hours for eating, sleeping, exercising, and attending to the calls of nature must be insisted upon, for it is a well-known fact that irregularities in living are responsible for many of these conditions. When there is any tendency to constipation it should be corrected by frequent abdominal massage, exercise, dilatation of the sphincters, together with mild cathartic mineral water in moderate quantities, or a tonic pill composed of aloin, strychnine, and belladonna, given three times daily; strong purgatives are contra-indicated, for their effect is only temporary, and not infrequently they increase the irritation already present. The treatment proper should be both "palliative" and "operative."

Chronic Catarrh. There are two essential features in the treatment of this condition; first, absolute *rest* in bed in the recumbent position; second, keep the bowel clear of all irritating ingesta. In addition to these the rectum and colon must be flushed daily with large quantities of boiled filtered water, antiseptic and astringent solutions. I have been in the habit of injecting through a colonic tube a quart of water containing thirty grains of the nitrate of silver twice a week. In the mean time

a weak solution of alum-water, say two teaspoonfuls to a half gallon of water, at morning and night. There are many other solutions that are good; a favorite of mine is composed of linseed oil, two ounces, subnitrate of bismuth, one dram, and the balsam of Peru, two drams. Mathews, of Louisville, prefers the following: Sweet almond oil, one pint; subnitrate of bismuth, three ounces; iodoform, one dram. Sig. Shake well and inject one ounce twice a week. I have recently tried this prescription in two very aggravated cases, and was very well pleased with the results. A fountain syringe will do to flush out the rectum, but I much prefer a Davidson when the medicine is to be thrown into the colon, for two reasons: In the first place, when attached to the tube, if the latter gets lost in the fold of the mucous membrane, the water can be thrown against it with such force as to raise it, and the tube will then pass upward into the sigmoid and colon. In the second place, the exact amount of medication that we desire to use can be thrown into the bowel; on the other hand, when the fountain syringe is used any small quantity is liable to be lost in the long tubing.

Stricture of the rectum requires both palliative and operative treatment. The object in the first is to alleviate the pain that the patient may obtain rest, and is best done by keeping the bowel clean by flushing it with antiseptic solutions, to be followed up by the use of soothing lotions, applications, and ointments. The operative procedures resorted to for the relief of stricture are three in number, viz: (1) Colotomy. (2) Posterior proctotomy. (3) Dilatation, either gradual or forcible. And I might add that in cancer the indications for treatment are almost identical with those of stricture. The treatment of polypi is very simple. They are seized with a pair of cat-tooth forceps, pulled down, ligated, and that portion external to the ligature excised. Prolapsus in mild cases should be treated by astringent injections and nitric acid applied to the redundant tissue. When an operation is indicated there are a number to choose from, but the most satisfactory way is to draw a Paquelin cautery point over the redundant mucous membrane a number of times from above downward, and if it is a very bad case, press it deeply into the sphincter muscle in two or three places. Some prefer excision of the protruding portion of the gut, and still others recommend certain plastic operations.

Ulceration. Simple ulceration of the rectum or sigmoid will usually heal when kept clean and stimulated by the application of such remedies as the nitrate of silver, fifteen grains to the ounce, balsam of Peru, calomel, and the sterate of zinc with iodoform, menthol, ichthyol, or the balsam. When the ulceration is chronic it will be necessary to either divulse or incise the sphincter and curette the ulcer; the after-treatment consists in keeping the rectum clean and applying the stimulating medicines just named, and in all probability the ulceration will be perfectly healed in two weeks.

Villous Tumors are best removed by transfixing the base of the tumors with a double ligature; this is to be cut and each side tied separately.

Fecal Impaction. Fecal impaction can be relieved by abundant and frequent injections of hot water, oil, turpentine, etc., in conjunction with persistent massage of the fecal tumor.

In conclusion I wish to state that I do not believe that all or even the larger per cent. of cases of *chronic diarrhea* are due to disease of the terminal portion of the colon, but that I do believe that the source of irritation producing the *frequent evacuations* is to be found therein very much more frequently than is generally believed at this date.

Ninth and Grand Avenue.

TREATMENT OF FISTULA IN ANO.*

BY GEORGE J. COOK, M. D.,

Professor of Gastro-Intestinal and Rectal Surgery, Medical College of Indiana; Visiting Surgeon for Diseases of the Rectum to the Indianapolis City Hospital and City Dispensary; ex-President Mississippi Valley Medical Association; Member of the American Medical Association, etc.

INDIANAPOLIS, IND.

[Written for MATHEWS' MEDICAL QUARTERLY.]

The ingenuity of surgeons has been exercised in all ages to cure fistula without the use of the knife, because of the natural fear of this instrument, especially in connection with this disease. Over two centuries ago the royal patient of Felix spent a year trying all manner of remedies, from mineral waters to the plaster

*Read before the Northern Tri-States Medical Association, July 17, 1894.

of Madame de la Daubiere, for the relief of his fistula, before he would submit to the treatment that finally cured him. And human nature is the same to-day; the surgeon's knife is the last resort, though the patient may have used remedies much more painful. And the decision of Bessieres, after examining the fistula of Louis, that "all the remedies in the world are of no account without an operation," is applicable to the great majority of anal fistulas to-day.

The success of Felix in his operation with the knife on Louis XIV, in 1686, established this operation for the cure of fistula, and it has stood ever since. Cutting is the only treatment for fistula which a surgeon can use and positively promise a cure. Every other means is uncertain. It is true that some fistulas have been cured by passing a probe through the tract, the irritation being sufficient to excite the healing process. Again, many have been cured by cauterization of the tract, or the application of stimulating medicines; but no surgeon can truthfully promise positively to cure a fistula by the application of medicines alone, no difference how simple or recent it may be. I do not know of any new method for treating a fistula. All the methods adopted now were used centuries ago. The technique may be different, especially since the advent of antiseptic surgery, and the results of treatment are certainly much more favorable.

The ligature is as old as surgical history, and in the time of Louis XIV one Lemoyne grew rich treating fistulas by means of caustics. The method of treatment by caustics or stimulants at present is about as follows: The patient having been prepared by thoroughly clearing the bowels, the fistulous tract is cleaned by injecting peroxide of hydrogen*; then the caustic is injected, which is usually carbolic acid from 50 per cent. solution to pure acid, or nitrate of silver from 30 to 60 grains to an ounce of water. After getting the full effect of the caustic on the walls of the fistula, then inject oil of eucalyptus, pure or mixed with equal quantity of oil of sweet almonds, or a solution or mixture of iodoform; then if the fistula is located so that pressure can be made, apply a firm pad of cotton, and hold it tight by a T bandage and keep the patient quiet for a day or two. This treatment is thoroughly antiseptic and will cure sometimes; I have had success with this treatment when I little expected it. But the most that

*Marchard's is the standard preparation.—Ed.

can be promised the patient is that it may cure, and if it does not no harm will be done, and other means can be adopted later if necessary. This method is applicable only to simple fistulas recently formed, or those in which there is not much induration around the tract, the object of the application being to promote granulation and remove the inflammatory exudate. The same object may be attained by scarification of the walls of the tract. For this purpose an instrument has been devised by Dr. Mathews, similar to the urethratome, but with two knives. The instrument is passed through the tract as a probe, then the knives are exposed and the instrument withdrawn, making two incisions through the opposite sides of the fistula along its entire extent. If the fistula is branched, it will be a waste of time to try either injection or scarification. The ligature is one method of cutting open a fistula. A number of years ago Dittel brought the elastic ligature into prominence, and later Allingham made it quite popular for a time, but this at best is slow and painful, and now it has almost passed out of use. Some surgeons have used the cautery knife to open the fistula, and at the same time cauterize the tract. I can not see any advantage in this; the edges can not be trimmed as nicely, there is likely to be more irritation than we wish, and the healing process will certainly not be more rapid than when we use simply the knife.

The electro-cautery wire has also been used to open the tract, but the same objection would apply to this as to the thermo-cautery knife. The best and only certain treatment for a fistula, and applicable alike to all forms, is by means of the surgeon's knife and scissors. The usual process is familiar to all, and I will not take time repeating it.

During the past two years I have used the modification of this method, practiced several years ago by Dr. Frederick Lange, which consists of opening the fistulous tract and cutting out the indurated tissue surrounding it, thus converting it into a simple healthy wound, then bringing together the raw surfaces with sutures with the object of securing immediate union. Antiseptic surgery makes this possible. Cutting the fistula out is a very old practice, but before the date of antisepsis no attempt was made to have immediate union; it was rare indeed that such results could then have been accomplished.

I have had very favorable results from this operation, and now I adopt it in all cases where the wound can be closed after the indurated tissue is removed. If the fistula is of such character that the opposite surfaces could not be brought together and properly adjusted after removing the induration, no attempt should be made to remove it, but thorough scarification should be done with the knife after opening the fistula, and the tract be allowed to close by granulation. Formerly the difficulty in this operation was to secure union of the deep part; often the surface would heal, leaving a fistula at the bottom greater in extent than the original one. To remedy this Lange used two rows of sutures—a deep row of buried sutures to close the bottom of the wound, and a superficial row to close the surface.

My method of operating is as follows: The patient is prepared in the usual way for such operations. After the sphincter is thoroughly stretched, the rectum is washed out carefully with bichloride solution 1 to 4,000, then the fistula is slit open; for this a pair of strong, straight scissors will be found better than a knife. Then remove the indurated tissue, which should be done thoroughly, taking care to cut out clean both ends of the fistula, not leaving any pale or unhealthy skin or mucous membrane at these points. Search carefully for branch channels, and when found treat them in the same way, using the bichloride solution freely during all this time. To close the wound use catgut, and only a single row of sutures.

With a curved needle pass each suture entirely beneath and around the wound, not allowing the suture to come through or appear in the bottom of the wound. They should be placed close together, and great care used in placing the upper ones in the mucous membrane, so as to thoroughly close that end of the wound. When the sphincter is cut care is necessary to have the ends approximated, and secure a good muscle afterward. When all the sutures are passed, wash out the wound again before tying; then when the wound is closed cover the parts with aristol, and keep the patient in bed as quiet as possible for several days; keep the bowels quiet with opium for four or five days, then wash them out by injection of hot water. By placing the sutures in this way the bottom of the wound can be brought closely together, and as well or better than by a row of buried sutures. Septic

matter can not enter the wound along the sutures, because they do not touch the wound surface. I have not failed yet in a single instance to have the bottom of the wound unite. In some of the cases one or two of the stitches cut through the skin and allowed a slight separation, but it was only of the skin and healed promptly. I have closed some very deep fistulas in this way with perfect results. In some cases where the main fistula could not be closed, I closed the branches or a part of the main tract, and lessened very much the part to close by granulation. Where immediate union is secured in this way the advantages are very great:

First. There is no gap left in the sphincter muscle, which is of special importance in females, if the muscle has to be cut anywhere in its anterior part, or in any case where the muscle has to be cut more than once.

Second. The patient is well in a week.

18 West Ohio Street.

THE MURPHY BUTTON; REPORT OF CLINICAL LECTURE AND DEMONSTRATION OF BACON'S RECTAL STRICTURE ANASTOMOSIS.

BY C. E. RUTH, M. D.,

Proj ssor of Descriptive and Surgical Anatomy in the Keokuk Medical College, and Clinical Surgery in St. Joseph's Hospital.

KEOKUK, IA.

[Written for MATHEWS' MEDICAL QUARTERLY.]

One and one half years have passed since I begun experimental work with the Murphy button. The question is frequently asked, What do you think of it now? Enough time has now elapsed to place its use on a sound basis or condemn it forever. Theoretical objections must now stand in the background while experience is passed in review. All who have witnessed the demonstrations of myself and others and examined the specimens presented of previous anastomoses could not but admit that it was an ingenious device which furnished the strongest junction known.

No foreign body being left permanently in the lumen or walls

of the gut were strong points in favor of the button. Nor was the short space of time required to make the anastomoses, five to ten minutes, to be lightly considered. These facts have taken deep and favorable root in the minds of the profession. It was urged that the button might cause secondary obstruction by failing to pass the ileo-cecal valve. The work that I had done on animals indicated that these objections were not valid. Still, as the dog's intestines are stronger than those of man, it was claimed that passage of the button on dogs was not a fair test of what would be done in the human subject under like conditions. I might collect a large number of cases by various operators to prove the validity of the claims I make for the button, but will only report the work thus far in my immediate vicinity. Having done all forms of anastomoses on animals with uniform success, I closed my experimental work thus far by doing Bacon's rectal anastomosis for stricture on a small dog, and found the rectum literally packed with inspissated feces and bones, the latter predominating. I stripped the entire mass with difficulty out of the way toward the stomach and made the anastomosis on the anal side of the mass. The button, bones, and all passed on the fifth day, and the dog was to all appearances perfectly well, and so remained. This has seemed to me the severest test possible for any anastomotic device. It is certainly a much greater strain than would ever be demanded in any approximation made on the human subject. Emboldened by experimental success I was prepared for the following case:

Case 1. October 18, 1893, I operated on A. Mathews, aged five years, for intestinal obstruction of three months' duration. He had been on liquid food and cathartics daily for the entire period. He was anemic and emaciated. Three large tumors in the ileum almost entirely closed the gut.

To remove the same together with all the enlarged glands required excision of the entire cecum, with two inches of the colon, three fourths of an inch of the ileum, and the appendix.

The child's recovery was uneventful and complete in two weeks. The button was passed on the eleventh day. The width of the colon was over three inches, while that of the ileum was less than one inch. The junction was made end to end, without previous narrowing of the colon by stitching. The purse-string was used, as in joining guts end to end of exactly similar size.

FIG. 1.

Figure 1 represents the cecum as turned wrong side out. No. 1 is the smallest of the three principal growths, and is beginning to ulcerate. Nos. 2 and 3 are the large growths. No. 4 is the mouth of the excised colon. No. 5 is the ileo-cecal valve. No. 6 is the appendix.

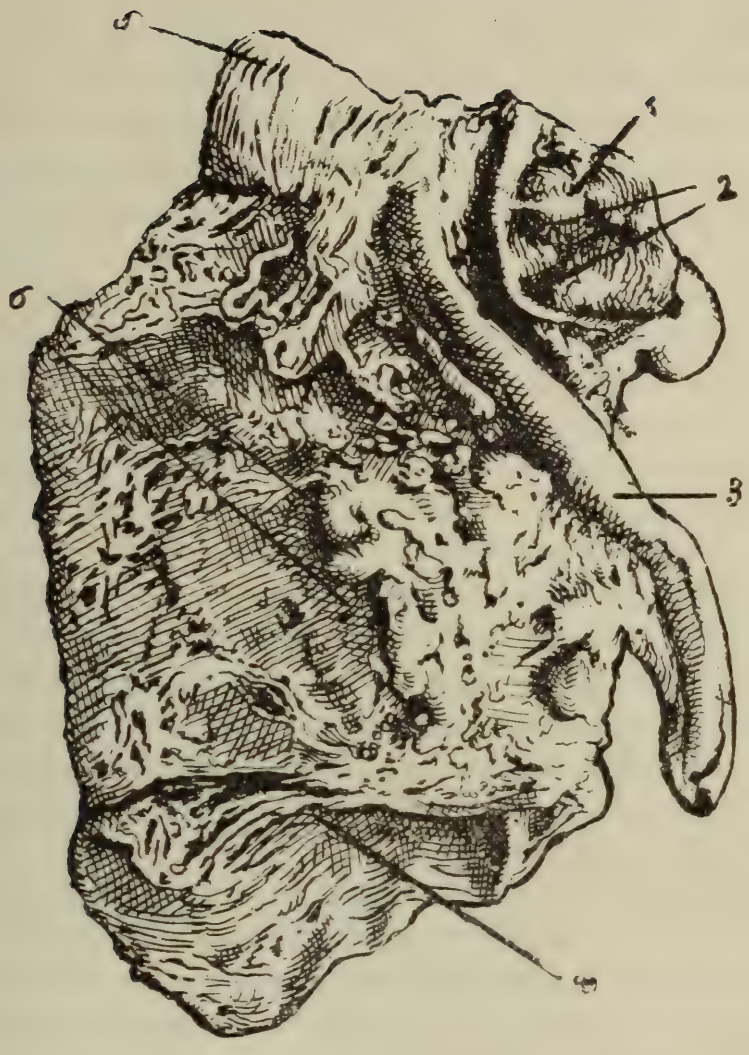


FIG. 2.

Figure 2 represents the exterior of the excised portion, with the lower end uppermost and the inner and posterior aspect forward. No. 1 is an enlarged gland in the ileum, No. 2 is the interior of the excised ileum. No. 3, appendix. No. 4, opening of the colon. No. 5, smallest growth pressing out the cecum, and appearing like a coil of adherent ileum within the cecum. No. 6, enlarged glands.

The microscopical examination of the specimens by Drs. Behring, of Iowa City, and Minges, of Dubuque, established the fact of the growth being sarcomatous. He remained perfectly well and of normal weight, strength, and activity for four months. Gradually he again became anemic, the mesenteric glands became involved, and he died of exhaustion, April 27, 1894, having lived one hundred and ninety-one days without any symptoms of obstruction following the operation. Had I used any other device I must certainly have immediately lost my patient from prolongation of the operation. His pulse was flickering in the neighborhood of 160 per minute. With no other device would I have dared to commence feeding in less than twelve hours.

Case 2. April 2, 1894, Drs. Newlon, Newton, H. W. Morgridge, and Chapman, all of Ft. Madison, made a resection of three inches of the ileum near its middle. The operation was made for obstruction due to a neoplasm situated in the mesentery. The patient was a child aged thirteen years, and very small of its age. His condition was one of extreme emaciation. End-to-end approximation was made with a large-sized Murphy button. The button was passed on the fourteenth day without inconvenience of any kind. In fact it was passed without the patient's knowledge. The case made a perfect recovery and is well at this writing, over two months after operation. This case *should forever settle the question of secondary obstruction* from failure of the button to pass the *ileo-cecal valve.*

Case 3. July 17, 1894, saw F. C., aged twenty-eight years, with Dr. H. A. Leipziger, of Burlington, Iowa. He gave a typical history of appendicitis, of two weeks' duration, before coming into his hands. The case had previously been under the care of Dr. Mahler, of New London, Iowa. Twenty-three days before, Dr. Leipziger had opened a large pus cavity in the cecal region, which remained open, one and three fourths by three inches, and discharged all food taken in a short time through two large breaches in the jejunum. Bile and pancreatic juice were mixed with the food passed, and cuticle was digested from the wound margins. Three attempts had been made to close the fistulæ without avail. It was decided to attempt resection, although the patient was almost dead of starvation. Five inches of gut, including the portion containing the fistula, was resected

and joined end to end with the Murphy button. As the abdomen was about closed it was noticed that fecal gas was passing, and the wound was reopened to ascertain from whence it came. Five inches more of damaged gut was removed, containing a pus cavity in the mesentery, and another junction made as before, but the opening through which the gas passed was not found. Death occurred in three hours. No post-mortem was permitted. The cecum and appendix were normal. The original slough had opened the mesenteric side of the gut, the same as the abscess found at the time of the operation was apparently about to do. It was evidently a case of tuberculosis of the mesenteric glands. This case warns us that we must not attribute all cases of suppurative inflammation in the cecal region to appendicitis. I also learned in this operation that not all the buttons on the market are trustworthy, and that all should be tested to determine that the thread and catches are all right and hold at all points before using.

In my first case I used the smallest sized button and fed my patient from the start. Gas was passed on the first and feces on the third day. This perfectly meets the objection that the opening through the button is inadequate in size. The contents of the small intestines, being always fluid, will pass with ease. In anastomoses of the colon there is no need that any thing but gas be passed till the button is ready to separate. Without looking farther for evidence and wearying your patience we may say, without fear of successful contradiction, that the following facts have been proven:

1. That the Murphy button shortens the time required to do an intestinal anastomosis fifteen to forty minutes.

2. Properly applied, leakage is impossible, and no hydraulic or gaseous pressure is needed to determine the fact.

3. It is the strongest junction known.

4. It gives the minimum of cicatrix and of contraction.

5. It is the only plan that can be relied upon to make the ideal end-to-end junction.

6. After completing its work it leaves no foreign body of any kind behind.

7. The idea of the button causing obstruction by failing to pass the ileo-cecal valve is a myth, if any judgment be used with

reference to the relative size of the button selected and the gut operated upon.

8. The greatly lessened mortality makes this hitherto almost impractical field of work compare favorably with other intraperitoneal operations.

9. It should relegate fecal fistulæ following operations for strangulated hernia and intestinal resections to the past.

10. No care need be taken to have the proximal and distal portions of the gut correspond in size.

Demonstration. We will now demonstrate Bacon's method of operating for the relief and cure of suitable cases of rectal stricture by lateral anastomosis between healthy gut above and below the strictured point. The entire alimentary canal, but especially the rectum, should have been as thoroughly emptied as possible some hours previously. My assistant now carries one segment of the button into the rectum through the anus as high up as the stricture will permit, and, directing its stem to the front wall of the gut, holds it in position to serve as a guide. The abdomen is now opened in the median line and the intestine seized above the stricture. Two rows of the running thread are next inserted parallel with each other in the wall of the gut one fourth of an inch apart. It must transfix the entire thickness of the gut wall. We now cut into the gut between the lines of the thread introduced, being careful to avoid cutting the loop. The cut should always be in the long axis of the gut and as far from the mesentery as possible, and not over three fourths as long as the button is wide.

The other segment of the button is now introduced through the opening made in the side of the gut by a slight rotary movement and held by an assistant with a forceps which grasps one side of the stem while the purse-string is being drawn, tied, and the stem of the other segment cut down upon. I make the opening down onto the stem of the lower segment only large enough to allow the passage of the stem. Of course the purse-string is not required for the lower segment. Both button segments are now grasped by the operator through the gut walls, the assistant removes the forceps from the upper segment and also the supporting rod or sound from the lower segment with which he has held it in position, and the stems are invaginated to firm approxima-

tion of the cup edges, care being used to see that serosa is applied to serosa around the entire circumference of the button, with no ends of purse-string or fringes of mucous membrane between. You see that we have stripped the contents of the rectum toward the stomach and placed a clamp in position to protect the field of operation from contamination. This is now removed, and an open gateway is at once established around the stricture, which is in a few days increased to more than the circumference of the button.

Dr. Bacon uses and recommends a small button, and after it has passed he introduces a clamp forceps and clamps out the septum of the folded or buckled portion of the gut. This seems to me unnecessary and a complication to be avoided. It is only applicable to cases of stricture within easy reach of the finger. It prolongs convalescence and certainly adds some gravity to the case. A large button can be introduced as quickly and easily as a small one, and it can be used in the manner above described in the sigmoid flexure. In any position in the large intestine the large button meets all the indications at once.

My use of the Murphy button has entirely broken down my skepticism regarding it, and convinced me that it is the most important surgical invention since asepticism was introduced in surgery.

323 Blondeau Street.

A MODIFICATION OF KRASKE'S METHOD OF EXCISION OF THE RECTUM: A TUNNELED FISTULATOME.*

BY H. O. WALKER, M. D.,

Professor of Rectal Surgery, Genito-Urinary Diseases, and Clinical Surgery in the Detroit College of Medicine; Surgeon to St. Mary's Hospital and Harper Hospital; President of Michigan State Medical Society, etc.

DETROIT, MICH.

Gentlemen: In making a selection of an operation for the treatment of a malignant growth of the rectum we are governed by the location and the amount of rectum involved.

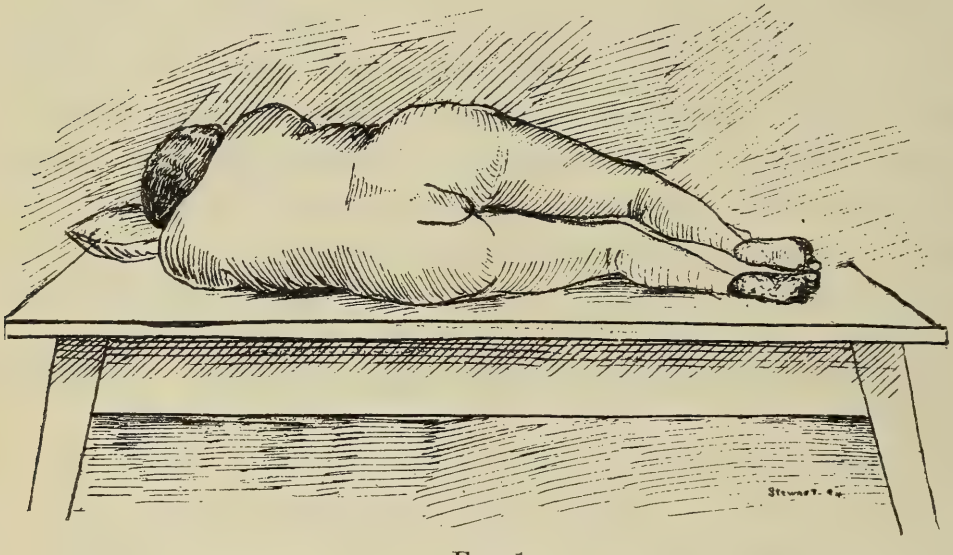


FIG. 1.

The results of early operations for the removal of malignant growths of the rectum are equal, if not better, than upon other parts of the body. Unfortunately we too often find the advancement of the growth so extensive as to prevent its removal, except in part to obviate obstruction or cause temporary relief. I hold that an operation of removal is useless when the disease extends beyond the environment of the walls of the rectum and involves the other pelvic tissues. We have at hand a much better procedure than an attempt at removal in this class of cases, namely, colotomy, of which I shall speak further on in discussing the various operations for cancer of the rectum.

* Read before the Michigan State Medical Society, May 3, 1894, at Lansing, Mich.

Although the title of this paper only suggests a modification of Kraske's operation, yet I take this opportunity to allude to other methods in the way of comparison. As has already been said, the location of the disease governs the method of operation. If the disease involves the anus and sphincters it will be gotten at much better by the external elliptical and deep dorsal incision, as devised by Allingham, jr. If it extends or is located anywhere above the sphincters it is reached with greater ease by a method called Kraske's operation, which consists in placing the patient on either side, according to the convenience of the operator, and then making a median incision from the middle of

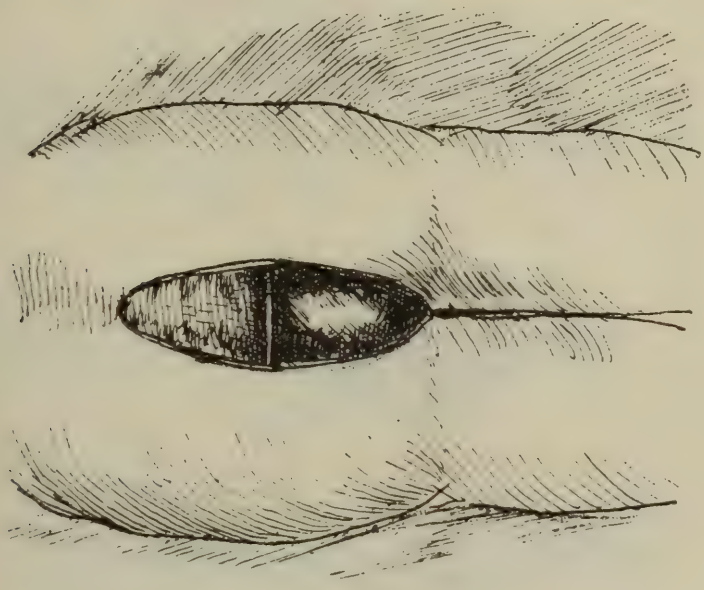


Fig. 2.

the sacrum down to the anus, separating such attachments to the coccyx as are necessary to its removal. It will then be seen if sufficient space is offered for the ready excision of diseased portions of the rectum; and, if not, a portion of the sacrum can be cut away with Keen's rongeur forceps. If the anus is involved, this should be liberated by a circular cut, and the rectum freed from its bed well up, drawn down, and the gut severed above the growth. The cut end is then attached to healthy tissues below by sutures, a drainage-tube introduced into the peritoneal cavity, and the rectum and wound plugged with gauze. It was found, however, that better success followed this operation by closing the peritoneal cavity, as it prevented the liability to peritonitis.

Where the sphincters are not involved, their removal or division is to be condemned, simply excising that portion of the rectum affected with the disease and then approximating the cut ends with interrupted sutures, a procedure that is exceedingly difficult and well-nigh impossible in certain cases, a fact that is pointed out in fatal cases both by Kraske and Schede, for the reason that the stitches gave way and permitted the fecal matter to escape into the peritoneal cavity. You can never be sure that the cut surfaces are accurately approximated. Aside from this the necessary irregular adjustment will diminish the caliber of

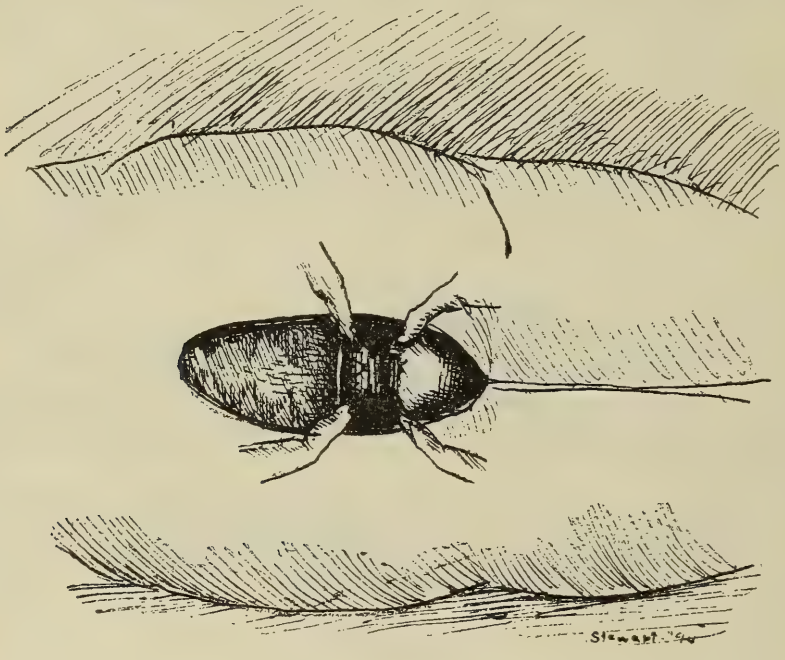


FIG. 3.

the rectum, and this will continue to diminish by cicatricial contraction. I am forcibly reminded of this by the examination, a few days ago, of a case upon whom I had operated last summer by this method for removal of a carcinoma of the rectum. I could scarcely get my finger through the cicatricial contraction. I had another case, also last week, of this same kind, who about a year ago was operated upon by a celebrated rectal surgeon by this method of approximation just described.

To obviate this difficulty of approximation I have suggested the use of an enlarged Murphy button, for a description of which see MATHEWS' MEDICAL QUARTERLY for January, 1894. Acting

on my suggestion, Dr. H. O. Marcy, of Boston, did a resection of the rectum, using the largest-sized Murphy button, not as large as the one I have recommended. He reports the patient having left the hospital twenty days following the operation, and that an examination of the rectum two months afterward did not show any contraction.

It has occurred to me that the sacrifice of the coccyx and a part of the sacrum is unnecessary. I have worked out upon the cadaver a method that prevents this sacrifice, which will appear plain to you by the exhibition of the following plates: Figure 1

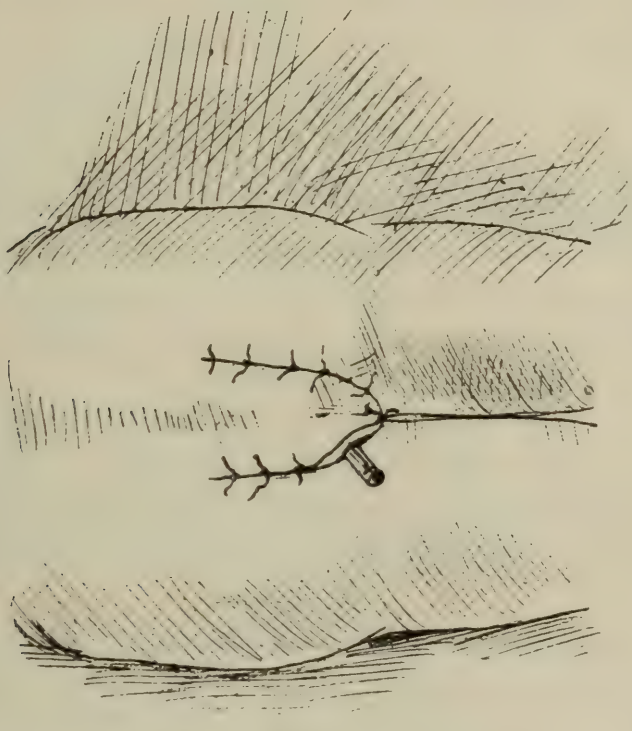


FIG. 4.

represents the position of the patient and the horseshoe line of incision, which you will observe extends from the tip of the coccyx upon either side as far up as a point opposite the fourth sacral vertebra. Figure 2 shows the coccyx liberated from its attachments with as much of the sacrum as is necessary, cut partially through anteriorly on each side with an Adams saw, and then forcibly pulled back, leaving the posterior periosteal attachment which serves as a hinge. We then have full exposure of the rectum down to the sphincters, and, with reasonable traction, up as far as the sigmoid flexure. Figure 3 represents the two

halves of the button in position for adjustment. Figure 4 represents the osteo-skin flap turned back and sutured in position, with the drainage-tube introduced.

In order to save the sacrum and coccyx, Levy proposed making the first incision horizontally across the sacrum about half an inch above the cornua of the coccyx. This incision should be from four to four and a half inches in length, and then make vertical cuts downward from each end through the entire thickness of the gluteus maximus muscle. The bone is then sawed or cut through and the whole pulled downward, exposing the rectum to view. It will then be necessary to cut more of the sacrum away, which will afterward necessitate bone suturing when the parts are brought into position after resecting the bowel.

It will be seen that the method I suggest divides the sacrum but once and does away with bone suturing, and affords a much better opportunity for drainage.

There seems to be a growing tendency on the part of many rectal surgeons to do colotomies oftener and earlier than formerly, for the palliation of a cancer of the rectum, although many good surgeons are loth to do the operation.

If there is no possibility of complete extirpation of the malignant growth, it then becomes a question of either a lingering and painful death or the establishment of an artificial anus. This will prolong the life of the patient with but a minimum of discomfort.

A colotomy done with the improved technique that we have at the present time is almost *nil* as far as danger is concerned, and, if done at all, the earlier the better. My experience is so limited that it should hardly be considered of weight as an argument for doing the operation, and, although I am on record as opposed to it, yet the more I see of it the more favorably I am impressed with its advantages. The consensus of opinion of such men as Allingham, Cripps, Bryant, Eiselburg, and Kelsey, who by their experience favor this operation, merits our careful consideration. The choice of an operation for the relief of cancer of the rectum resolves itself either into first, a radical extirpation that is suitable according to its location; second, either a proctotomy or a partial excision for obstruction; third, a colotomy.

A Tunneled Fistulatome.

The difficulty of introducing a groove director or a silver probe when operating for fistula in ano has undoubtedly been apparent to those of you accustomed to doing this operation.

For several years, when failing with the groove director in introducing a filiform bougie through the fistulous tract, I used it as a guide in making the operation, and in order to further simplify it I have had made this fistulatome, as represented in

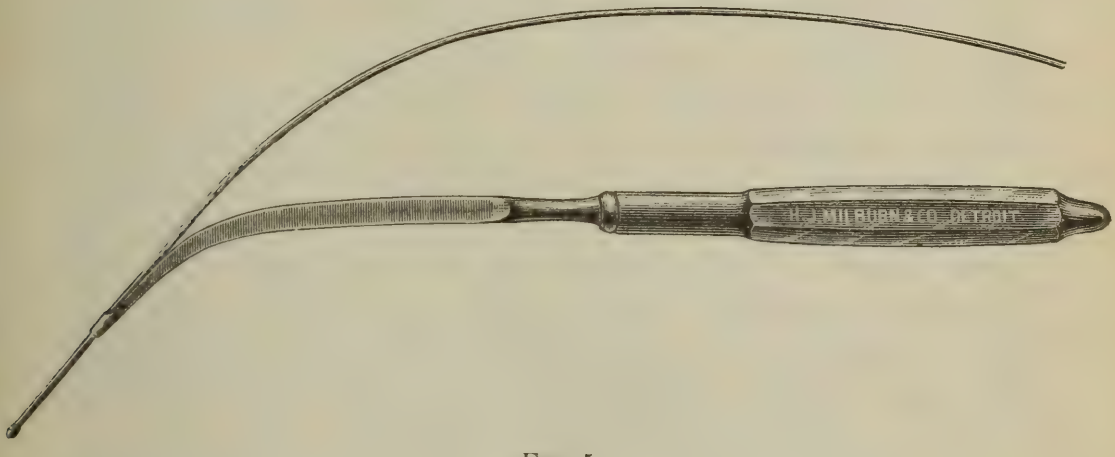


Fig. 5.

Fig. 6.

Figures 5 and 6, which is simply the adding of a tunneled end to a large-sized curved bistoury. You can readily see that after introducing the filiform bougie through the fistulous tract how easy it will be to slide the instrument over it and make the desired cut outward of the fistula.

Gastro-Intestinal Disease.

STOMACH DISEASES OF WOMEN.

BY BYRON ROBINSON,
CHICAGO, ILL.

[Written for Mathews' Medical Quarterly.]

On page 497 of the July number I note the remarks of Germaris in regard to the mistaking stomach troubles for colon diseases, especially in women. I think that Dr. Germaris' conclusions are misleading. For years I have worked in large clinics for women, and it has become one of the fixed ideas that when a woman complains of stomach trouble it is nearly always from genital disease. I have tested this time and again with new internes and young physicians, that when the woman would complain of stomach trouble actual digital examination would reveal some genital disease. Many times the interne would send the woman to the physician for internal medicine.

The stomach diseases of women in general are reflexes from pelvic irritation. I do not deny that they have colitis, but the colitis is mostly irritated by and secondary to pelvic disease. The stomach trouble is only the steps on the way to neurosis. The general statement will hold true that when there is reflex visceral irritation in an adult it is mostly from diseased genitals.

The reasons for the above statements are based on clinical and anatomical observation. Any one who will take the pains to carefully dissect the female infant which has lain in alcohol a month, or a very spare adult female cadaver, will easily note that the genitals and kidneys have the highest nerve supply of any viscera. He will easily see that the origin of this vast net-work of nerves arises chiefly out of a mass of nerve tissue situated behind the stomach, and known as the solar plexus or abdominal brain. He will see by a glance that this great ganglionic mass lying around the celiac axis sends nerves to the stomach by way of the gastric, hepatic, and splenic arteries. The connection of the stomach to the abdominal brain is intimate and widespread,

while the genital nerves arise out of the abdominal brain, so that the stomach and uterus are intimately and profoundly connected. In diseases of women we are frequently confronted by reflex neurosis. Dr. Germaris' paper quoted in the QUARTERLY is certainly dealing with reflex neuroses. The term reflex neurosis has become with destructive and harping critics a placebo to cover up ignorance. Such critics announce that we know nothing of reflex neurosis, that what is reflex neurosis to-day will be something else to-morrow. This is a low estimate of human reason and human progress. The only things that displace old theories are new facts, and if a new fact, physiologic or pathologic, be discovered it ought to be applied in dislocating any joint which does not harmonize with truth. It behooves us to have some reasonable basis for what we choose to term reflex neuroses. I mean by reflex neurosis a disturbance in distant parts by the irritation in some sensory or motor peripheral area. This implies a sensory area and conductor. It implies a center to reflex or reorganize. It requires a motor area and conductor. The sensory area may be any viscus, but especially the genital, as the genital nerve connection is vast and the liability to disease is great. The reasons that the genitals are liable to disease are numerous. First, they have a vast and complicated nerve supply. Second, they have a large and irregular blood and lymph supply. Third, they are so violently and frequently congested by thought and natural use, so rapidly changed in nutrition—in short their blood supply is so varied that nutrition is imperfect. Fourth, the genitals are so frequently the recipient of many forms of infections, specific and non-specific, that with the imperfect nutrition the disease progresses. Fifth, the burdens of the genitals during the seed-time and harvest are numerous and weighty. As the scale of animal life ascends the genitals acquire more disease. The higher the intellect the more thought is applied to the genitals. The monkey manipulates the genitals more than any animal below him in intellect. Hence the ascending scale of life tends to increase the profound and intimate connections of the genitals to the nervous system.

The sexual instinct is the most dominant of all instincts. With some practical experience we think Dr. Germaris would find more irritation in the genitals of women than his "abstract"

would indicate. Hence we may assume the complicated genitals as the sensory peripheral area in this reflex neurosis. Now what shall be the arc of reflection on the center of reorganization? A few careful dissections will soon convince any one of the extensive connection of the genitals with the abdominal brain by means of a great bundle of nerve channels known as the hypogastric plexus. It is true that the genitals are supplied by the third and fourth sacral spinal nerves, but the great bundles are the sympathetic, the hypogastric plexuses. The center may be located in the cord, but the connection of the cord and sympathetic plexus by the rami communicantes is very thin and small. What about the large nerve mass around the celiac axis? Of what use is this collection of nerve ganglia? It is acknowledged by histologists to have nerve cells and processes—in short, all the elements of the brain. Now a nerve cell and process is at present looked on as a distinct isolated anatomical unit. It is in direct contact with no other cell. The nerve cell is Waldeyer's neuron, a nerve unit, an independent body. It has three parts: The cell itself, its process, and the arborization or end of its processes. They are all one and the same thing, viz., a neuron or ganglion cell. Such a cell has for its essential the neucleus, which controls nutrition and reproduction. The abdominal brain contains collections of these nerve units or neurons. This assemblage of ganglionic masses we will take for our center of reorganization. It possesses, like all nerve cells, the power of receiving sensation, of giving out motion. It controls nutrition and reproduction. It presides over secretion and absorption. In short, it is a true brain, a center of conservation of nerve force. This monitor takes note of the conditions of all viscera. It receives the visceral impulse or irritation and redistributes it. The balance of the sympathetic nervous ellipse may be unhinged even in health as in pregnancy, but in general the ganglionic rhythm of every viscus goes on evenly and smoothly. But if a focus of disease arise in any viscus, instead of natural visceral rhythm, it will be irritation that must pass from that focus. Irritation will pass by no rule, but day or night, in season or out of season, the irritating disturbances pass from the pathologic focus to the abdominal brain or reorganizer.

Having now placed the peripheral irritation in the genitals

and the reorganizing centers in the abdominal brain, we may now speak of the third part of the nerve arc, that is, distant part disturbed. When the irritation is reorganized in the abdominal brain it is emitted to all the viscera over their respective plexuses. The force will go out on the plexuses of least resistance, that is, on the plexus containing the greatest number of nerve strands. The effect on any viscus will be according to the nature and function of the viscus. Whatever it be it will destroy that function and induce malnutrition and final neurosis. The liver, heart, digestive tube, and kidneys are in part or wholly disturbed. Therefore we think that Dr. Germaris' "abstract" is misleading for the following reasons:

1. Reflex neurosis in the viscera is nearly always from the genitals.

2. The genitals are more liable to disease than any other viscera.

3. The genitals have the most intimate and profound nervous connection of all viscera.

4. In reflex neurosis bowel troubles are chiefly secondary to genital disease.

5. In my experience in gynecological clinical work, in nearly all cases who complain of stomachic disturbances it was found that the genitals had well-established disease.

6. It was also observed that as the genital disease recovered the stomach difficulties gradually decreased.

7. The gradual steps in reflex neurosis in a patient are: (*a*) some point of irritation (genitals), (*b*) indigestion, (*c*) malnutrition, (*d*) anemia, and (*e*) neurosis.

Society Reports.

LOUISVILLE SURGICAL SOCIETY.

Stated Meeting, March, 1894, Dr. A. M. Vance, President, in the chair.

CARCINOMA RECTI.

Dr. W. C. Dugan: The specimen which I present is a tumor that occupied the lower part of the rectum to within one half inch of the anus. The patient was a young woman about twenty-two years of age, who came to my clinic with almost complete obstruction of the bowels. In making a rectal examination I was able to force my finger through, but it gave her severe pain, and quite a hemorrhage followed the exploration. The history was, that two years ago she noticed she was becoming more and more constipated, and that her stools were very small, though at times alternated by diarrhea, which is known to be very common, and is most certainly the result of fermentative changes in the accumulated fecal matter. The obstruction was so very gradual and the pain so inconsiderable that she never realized how serious it was until complete obstruction existed. I made the diagnosis of carcinoma of the bowel, and advised excision, which was consented to. I did the operation at my college clinic. With a pair of curved scissors (blunt-pointed) I made a circular incision around the anus, cutting one half inch from the orifice; then cutting the external sphincter muscle behind and in front so as to bring it down; then following it down with a blunt pair of scissors, keeping as close to the gut as possible, yet being careful to keep well beyond the suspicious tissue where possible, until the levator ani was exposed. Then, with a knife, it was cut entirely around, and we then found no trouble in bringing down the gut with a degree of ease that would surprise the inexperienced. At this stage of the operation it was found that at one place the growth had so extended as to apparently incorporate the wall of the vagina, and it was here that we experienced the only really serious difficulty. The tumor seemed to have ex-

tended more in that direction than elsewhere, but by having one finger in the vagina and cutting with a pair of blunt scissors I avoided opening the vagina. I do not feel, however, that if I had cut into the vagina it would have been a serious surgical mishap, and I shall watch the case with care, and if in a short time I find the growth was not all removed I shall cut the vagina and do a modified Kraske's operation. Each case must be a law in itself. I thought I was above the tumor and started to cut off the bowel, when I discovered that the growth extended still further, so continued my dissection around until you will notice I have made a section through the normal gut.

One point in this connection I wish to emphasize, that is, the mistaken idea that carcinoma occur almost entirely in the old. This is the second case of cancer of the rectum I have met with in young people within the last two or three months. Some time ago I reported to this Society a case of sarcoma of the breast occurring in a girl only thirteen years of age, and I have a patient under observation now, under twenty years of age, who had an enormous sarcoma of the mammæ removed only a few days ago.

In the case I have reported to-night the symptom of pain was lacking, which is contrary to the opinion generally entertained, and I might say that it is even not a common symptom in these cases. In carcinoma or cancer involving the lower part of the bowel and also involving the skin, there will be pain, becoming more and more intense, whereas, if it begins above the internal sphincter, it is, according to my experience, one of the latest symptoms to develop, the symptoms being those of obtruction only. When there is pressure upon the nerves then we have pain extending down the thigh, and such symptoms give us an idea of the size of the growth. When the tumor is of sufficient size to press forward upon the bladder severe pain may be manifest in that organ, and I take it that this symptom should have a great deal to do with operative interference.

DISCUSSION.

Dr. A. M. Cartledge: I was very much interested in the report made by Dr. Dugan, and agree with him that this is probably one of the best methods of dealing with carcinoma of the

rectum. Unquestionably such a case as he presents is not usually considered a favorable case for excision of the rectum, the disease being very extensive; it seems to involve nearly the entire bowel, and such a case I believe would usually be considered one for colostomy rather than excision. However, I agree perfectly with Dr. Dugan that his conservative operation has prolonged life and induced a condition of comfort that possibly might not have been obtained by the operation of colostomy. I do not think the conditions here are favorable for a non-recurrence, in fact I think it will be almost certain, as the cancerous mass was so extensive. I take it that Dr. Dugan's operation was more with a view of relieving obstruction of the bowel and the prolongation of life, rather than a radical operation which would prevent recurrence of the trouble.

I am glad Dr. Dugan called attention to two points: first, the almost entire absence of pain in some of these cases; second, the fact that we rely too much upon the age of the patient in cancerous disease. While we know that cancer of the alimentary tract as a rule occurs after thirty-nine or forty years, the fact that it may occur very much sooner should not be overlooked, as this case amply demonstrates. All these questions are of especial interest to me, and I hope I may be pardoned for speaking in this connection of a cancer of the sigmoid flexure that I operated upon to-day in the case of a woman fifty-five years of age. The history of the case is a little remarkable, and I report it simply because of the fact that Dr. Dugan has made a point of the absence of pain. This lady was apparently well until the first of January of this year, when she rather suddenly became constipated, which in a few days led to obstruction of the bowel. Her physician was called, who looked upon the case as one of adynamic obstruction, due to atony, probably with fecal impaction seemingly so slight that it could not be detected from an external examination. The bowels simply would not move; by a rectal examination he could not discover any mass. He treated her, without an action of the bowels, for three weeks. I saw the case in consultation about the 27th of February. At this time the lady's pulse was 100, her temperature normal. She had considerable abdominal distension, but she was still able to pass gas freely, which unquestionably accounted for the tolerance of the

condition. After consultation I told the doctor I thought there was organic obstruction, and advised an exploratory incision. I left the physician in charge, who said he wanted to try the administration of large doses of belladonna; I agreed to that, and suggested the addition of fresh oxgall every four hours. This was given, and strange to say the bowels did move the next day very copiously, still it was only a thin, watery character. I believe she had sixteen stools that day under the treatment mentioned. Of course I simply yielded my position entirely to the physician, that the obstruction was adynamic and not mechanical in character. At this time her physician was called away from the city, and left the patient in my care. After a day or two the bowels lapsed back into the former condition of constipation, which existed for perhaps twenty-one days. Naturally enough we tried belladonna and oxgall again, and used almost every thing else of reputed value without any effect whatever. There was a little passage of gas at times when she was in a certain position, especially on the left side. I was embarrassed very much in the experience, from the simple fact that the bowels had moved after obstruction seemingly of twenty-one days, and yet after an examination of the rectum I felt a mass in the pelvis which seemed to be connected with the posterior part of the uterus, and I was satisfied that the obstruction started from that point. I passed a tube readily up as far as the sigmoid flexure without getting any fecal matter, and felt sure that the trouble could not be from fecal impaction. Examination of the abdomen revealed no solid tumor, and nothing further than the mass before spoken of behind the uterus. The patient was carefully watched until yesterday, when she began to fail rapidly; for the last three or four days there had been considerable nausea at times, but I could not gain my own consent to operate until yesterday, and the operation was performed this morning. After making an incision in the median line I went down upon the mass behind and attached to the uterus, which was the tumor I had felt. I will state that there was a history of peritoneal trouble in this case existing two years ago. On cutting down, the sigmoid was found as a large adherent mass attached to the uterus posteriorly. In order to facilitate the work the patient was placed in an exaggerated Trendelenburg position, and by careful dissection and sepa-

ration of adhesions an enormous cancerous mass as large as a man's fist was brought into view; the bowel was enormously distended above, with the collapsed rectum below. The mass was too large to think of the ordinary operation of excision, so I immediately made an anastomosis with the Murphy button of the colon above the mass to the rectum. This permitted the free passage of gas and fecal matter immediately into the rectum. The longest time was spent in getting the cancerous mass out from behind the uterus, which was finally done without rupturing the bowel. The anastomosis I should say occupied seven or eight minutes. The patient was taken off the table with pulse of 100; when she went on the operating-table pulse was 115. She is resting very comfortably to-night, and is seemingly in a normal condition. Exactly what the outcome will be I do not know, it being the first case of anastomosis by the Murphy button that I have made. I believe it is the first time the operation has been done here.

This case was characterized by freedom from pain throughout, except as a result of the distension, being in this respect similar to the case reported by Dr. Dugan. Then the trouble coming on so suddenly, and all the symptoms were misleading as to the malignant origin. The attack of peritonitis occurred two years before, which kept her in bed for six months.

Dr. W. O. Roberts: There are several interesting points about the case reported by Dr. Dugan. First, the age of the patient; second, the character of the growth—it seems to be a scirrhus. Then, too, it seems to involve the entire circumference of the gut at the upper end, and at the lower end only two thirds of it; the anterior wall of the gut does not seem to be involved at all. Scirrhus of the rectum we all know is not nearly so common as epithelioma. The involvement of the lower part of the bowel I should think would have caused a considerable amount of pain. As Dr. Cartledge says, cancer of the bowel frequently occurs without pain. I had a case not long ago, which is mentioned in Dr. Mathews' work on the rectum; the patient had never suffered until symptoms of acute obstruction came on. When I saw him there was enormous distension and vomiting, and every thing pointed to obstruction in the descending colon. He was given a number of enemata, but nothing except the water came away.

An examination of the rectum revealed malignant disease located in the upper part of the rectum; the constriction was so close that the tip of my finger could not be gotten through it. A colotomy was performed. I saw another case some time ago, occurring in a middle-aged woman, where there was sudden obstruction of the bowels, and a laparotomy revealed malignant stricture of the sigmoid flexure.

Dr. Dugan: Concerning the point of removal of the coccyx and lower part of the sacrum (Kraske's operation), I have tried this recently in operating upon a man sixty years of age, who had almost complete obstruction of the bowels, with considerable pain, and the growth had extended downward and involved the skin, and ulceration was fairly under way. I am in favor of Kraske's and its modifications in certain cases.

In the case I incidentally mentioned a few moments since I was very much deceived in the extent of the growth. There was in that case two distinct deposits, the first one being low down, while the other was about six inches up and was difficult to get away. I intended to excise about four inches of the gut, not more than that, but as I drew it down ready for excision I found on the anterior wall of the rectum still another cancerous mass, which exceeded in size the one I had already prepared to remove, consequently it became necessary to extend my dissection until at least six inches of the gut were removed, and I was surprised at the ease with which it could be done, as the peritoneal coat was easily stripped off.

There was one complication that gave me no little anxiety, and that was the urine all passed through the wound, showing rupture somewhere. In the afternoon of the day of operation the nurse told me there was very little urine. The question was, where was the lesion. As we dissected the tumor from the bladder I was careful, and, while much of its base was exposed, failed to see the rupture. The ureters were exposed, so we thought they were all right. But the next morning when I saw him I found the discharge very free, and the air in the room had a decidedly urinary odor. I thought possibly we had cut the ureters, but hoped that it was but a rent in the base of the bladder. The man passed no water from the urethra, and by catheterization none was found in the bladder for several days. But in the

course of four or five days some water was passed the natural way, and in less than ten days all the urine was voided through the urethra, so that the probabilities are the ureters were not injured, and so the bladder was most certainly torn. I simply report the case in connection with the other one, as it had several points of interest. I am quite sure I can excise even more of the rectum than was done in the specimen here presented (4 and $6\frac{1}{2}$ inches), and the operation is much more easily and quickly done than the Kraske operation, as I did in the last one referred to, removing two or three of the lower sacral vertebræ along with the entire coccyx.

MORTON, THOS. G.: CASES OF EXCISION OF THE VERMIFORM APPENDIX FOR CHRONIC RELAPSING APPENDICITIS IN THE INTERVAL. (*Southern Medical Record.*)

The first patient, a man, aged twenty-four, had had six distinct attacks of severe pain in the right ileo-cecal region, with the usual symptoms attending catarrhal appendicitis. Operation revealed the appendix and cecum bound down by adhesions. The appendix was tied off with its mesentery. Complete obstruction was present, as showed by section, and it contained about two drams of very offensive pus, being greatly distended at its middle. No unfavorable symptoms followed.

Case two had had six distinct attacks in sixteen months. He was a man, thirty-four years of age, and was satisfied he could not live through another attack. A lateral section was done, and the appendix found elongated, measuring seven inches; its distal end was attached far up to the side of the ascending colon. The latter being separated, the organ contracted to about four inches. It was removed with its mesentery, which was continuous throughout its entire length. Convalescence and final recovery slow.

The author concludes that he considers the operation a more serious one than formerly, yet he will continue to advise the excision of the appendix in all cases associated with a history of chronic relapsing appendicitis.

MATHEWS' MEDICAL QUARTERLY

"ALIS VOLAT PROPRIIS."

Vol. I. LOUISVILLE, OCTOBER, 1894. No. 4.

JOSEPH M. MATHEWS, M. D., - - - - - EDITOR AND PROPRIETOR.
HENRY E. TULEY, M. D., - - - - - ASSOCIATE EDITOR AND MANAGER.

A Journal devoted to Diseases of the Rectum, Gastro-Intestinal Disease, and Rectal and Gastro-Intestinal Surgery.

Articles and letters for publication, books and articles for review, communications to the editors, and advertisements and subscriptions should be addressed to
Editors Mathews' Medical Quarterly, Box 434, Louisville, Ky.

VOLUME I.

With this number Volume I of the QUARTERLY is complete. The editors feel that they have kept the promise made in the first number, that with the completion of the volume the readers would be in possession of all that was recent in the departments to which the journal is devoted, and that it would serve them as a valuable compend. Our contributors embrace some of the best-known names in the profession, both in this country and Europe. The selections have been made from the leading journals of the world. We have been fortunate in presenting excellent pictures of three of the best-known surgeons abroad, especially in rectal surgery, and we regard this as a feature to those who desire such a collection. To the publishers we are under many obligations for the artistic manner in which the journal is printed, and we return our sincere thanks to the distinguished gentlemen who have by their contributions aided us in making the QUARTERLY the success that it is.

NOMENCLATURE OF DISEASES OF THE GASTRO-ENTERIC TRACT IN CHILDREN.

In the *Archives of Pediatrics* for August, 1894, appears the report of the committee appointed from the American Pediatric Society to revise the nomenclature of the diseases of the stomach

and intestines of children, which was read at their annual meeting at Washington, May 30, 1894. The committee, composed of Dr. T. M. Rotch, of Boston, whose admirable original work in the investigation of milk and foods has proved so invaluable to science, and Dr. L. E. Holt, of New York, whose exhaustive article upon The Diarrheal Diseases, in Keating's Encyclopedia of Diseases of Children, is well known to all pediatrists, is to be commended for their excellent work.

There has been a crying need for uniform classification of diseases of the gastro-enteric tract, as for instance the death reports of many of our large cities will bear evidence. A glance at these shows the prevalence of the use of the term "cholera infantum" to designate the cause of death of the majority of fatal cases of gastro-intestinal disturbances.

The committee give excellent reasons for the compilation of this nomenclature and state that, "while it is necessarily a provisional one, it is a great advance upon the unmeaning and misleading nomenclature now current." At another place in this issue are published the conclusions arrived at by this committee, and it is earnestly to be hoped that writers in the future may adopt this nomenclature, that it may be understood whether they are writing about similar or different diseases.

The table of divisions, as published, appears complicated at first, but in reality it is concise and easily comprehended.

Among the inflammatory enteric disorders, acute, are mentioned appendicitis and ileo-colitis, or colitis. The latter is divided into catarrhalis, ulcerativa, follicularis (in which the ileum and colon are chiefly affected, and the cause of which is given as a number of organisms, the pathology for the present being collectively all forms which can not be classed under the pseudo-membranous and amebic), pseudo-membranosa (sporadica or epidemica), typhoidal, and amebic. Most of these classifications have their distinct symptomatology, and it would be well for the profession at large to take cognizance of this excellent report, both in their writings and their death returns.

Apropos of this subject there appears an article, in the

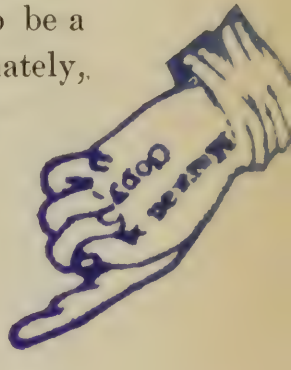
Woman's Medical Journal of August, 1894, upon "Cholera Infantum." The writer states, "as in every other *case* the most important treatment and the best possible prophylaxis is the removal of the cause, which, *in ninety per cent. of the cases, is due to dentition.*" (Italics ours.)

Two cases are reported as "cholera infantum," one in which the child had been vomiting for twenty-four hours, diarrhea *excessive,* though "the child did not look ill."

Now, here evidently was a case of acute indigestion, or of ileo-colitis catarrhalis, for whoever saw a child with cholera infantum which was not ill, and how fallacious to attribute this fortunately rare disease, or any other gastro-enteric disorder, to dentition.

"Teething" is a cloak for ignorance in many instances, when it is used as a cause for these disorders. "Is it not more scientific to attribute digestive disturbances to a known factor, improper food, than to a hypothetical one, a tooth still confined to its sac?" (Adams.)

We reiterate, that we believe cholera infantum, true, to be a rare disease, and that the term should not be used indiscriminately, as it seems to have been in the article above quoted from.



KENTUCKY SCHOOL OF MEDICINE.

"At the meeting of the Association of American Medical Colleges, held in San Francisco on June 7, 1894, the Kentucky School of Medicine, of Louisville, Ky., was dropped from membership in the Association."—*Exchange.*

The Kentucky School of Medicine was never a member of the American Medical College Association, but the requirements in the catalogue recently issued are higher than are the requirements of the Association. The school has been conducted in strict accordance with the requirements observed by the most successful and reputable colleges, and no school has been more respected by the honorable members of the medical profession.

In laboratory, didactic, and clinical work the school has adopted the most approved methods, and now that the Faculty have completed a large hospital, adjoining the College, no school in the country can offer better practical and clinical advantages.

FREDERICK SWINFORD EDWARDS.

Frederick Swinford Edwards, of 55 Harley Street, London, is a Fellow of the Royal College of Surgeons of England, and a Licentiate of the Royal College of Physicians of London. He holds the posts of Surgeon to the West London Hospital, and of Surgeon to Saint Peter's Hospital for Stone and Urinary Disease. He is Senior Assistant Surgeon to St. Mark's Hospital for Diseases of the Rectum. Besides being a member of other learned societies, he is a Past-President of the West London Medico-Chirurgical Society. He is joint author of Cooper & Edwards' Diseases of the Rectum, which work was reviewed in the July number of this journal. Among other contributions to surgery the following may be mentioned on rectal matters: Fistula in Ano, Its Pathology and Treatment—Transactions of the Abernethian Society, 1878; on Some of the Rarer Forms of Rectal Fistulæ—West London Medico-Chirurgical Transactions, 1887; Treatment of Piles by Injection, *ibid.*, 1888; Carcinoma of the Rectum, *Clinical Journal*, 1894. As a student at St. Bartholomew's Hospital Mr. Edwards gained both the junior and senior prizes for Anatomy, and after filling the post of House Surgeon to this Institution was appointed Demonstrator of Anatomy and of Operative Surgery in this medical school. He also held the post of House Surgeon to St. Mark's Hospital for Fistula for over two years. We are pleased to present our readers with an excellent likeness of Mr. Edwards.

Necrology.

WILLIAM CECIL DABNEY.

It is our painful duty to chronicle the sad death of Professor William Cecil Dabney, M. D., of Charlottesville, Va., at the University of Virginia, on the 20th day of August, 1894, of typhoid fever.

Dr. Dabney was born in Albemarle County, Va., July 4, 1849. He was educated in Albemarle, and at the University of Virginia. It was at the latter place he began his medical studies in 1866, at the age of seventeen years, and was graduated in June, 1868. He spent one year as an *interne* in a Baltimore Hospital, and began his practice at Roanoke, Va., in 1873, shortly after he had won the Boylston prize (Harvard) on the subject of "The Value of Chemistry to the Medical Practice." This prize was open to all competitors, and thus early he showed his abilities to cope with the best.

At the age of twenty he was married to Miss Jane Belle Minor, daughter of W. W. Minor, of Albemarle. His wife and seven children survive him—four daughters and three sons, the eldest son being twenty-one years of age the day of his father's death. It was in 1884 through the efforts of Dr. Dabney that the State Legislature passed a law creating a State Board of Medical Examiners for Virginia, and as chairman of the committee from the State Society which drafted the bill, and president of the first board, he was enabled to make it the efficient board which it is to-day.

In 1886 he was elected to the chair of the Practice of Medicine and Obstetrics in the University of Virginia. Realizing early the importance of pathology as a ground-work of the science and practice of medicine, it was through his efforts that a special chair of Pathology was established in this university. He was a man of national prominence, being a member of the Association of American Physicians, the American Medical Association, the Virginia Medical Society, and an honorary member of the West Virginia State Medical Society.

He was to deliver an address before the New York State Medical Association in the fall. He was a prolific writer, prominent among his compositions being a pamphlet upon the outline of the Principles of the Practice of Medicine, published for use in the University, and a hundred articles translated from the French and German, which were published in the *Virginia Medical Monthly;* "Some of the Topical Uses of Ergot," and an article upon "Atypical Forms of Typhoid Fever." This seems an almost fatal coincidence, as his own demise was caused by such an attack.

There are few men in the practice of medicine who could boast of a more extended acquaintance than the subject of this sketch. As resident physician at White Sulphur Springs during the summer months for seven seasons, he met many people and made many friends. Always in high spirits, sanguine and hopeful, he was a great favorite with all he met.

Though fond of his teaching and an eminently successful teacher, the culmination of his success was in the practice of medicine. He was a quick and ready diagnostician, arriving at conclusions oftentimes intuitively.

He was a member of Christ's Episcopal Church, Charlottesville, and a member of the vestry for more than twenty years.

He did a great amount of charity work, and was held in great esteem by the poor, as was evidenced by their attentions during his last illness.

He was sick but twenty-two days, active delirium being present during the most of this period.

Two brothers, Dr. S. G. Dabney, of this city, and Mr. Walter D. Dabney, Solicitor for the Department of State, Washington, and one sister, the wife of Mr. John B. Moon, of Charlottesville, Va., survive him.

A Word to the Busy Doctor.

The subject under discussion in the last issue was *Fistula in Ano*. My remarks now will apply necessarily to the treatment of this affection. I wish to impress upon the reader that the responsibility that rests upon a surgeon in the cure of *fistula in ano* is not by any means a slight one. The physician that imagines that the task is a very easy one will be woefully deceived in many cases. Therefore I would suggest that a prognosis be guarded in each case. As I have intimated before, nothing can be foretold by the evidence of the external opening, and when a diagnosis is made from this evidence only a great mistake will have been made. Nor does the probe reveal much, for it may follow only one channel, when in fact a whole buttock may be undermined.

Having determined to treat a fistula, the question arises, Which is the best plan to pursue; which operation of the number devised is to be pursued? First, I must say that every case must be an individual one. Very much alike is the selection of and the doing of an abdominal section: "to be decided after an exploratory incision is made." It is only after you have made your *cut* for fistula that you will decide how much *more* you will have to do. When an operation is decided on, see to it that all aseptic precautions are taken, and that you have an assistant present besides an anesthetist, if chloroform or ether is to be given. Do not ever attempt to operate in your office, but have the patient at home, surrounded as well as the circumstances will admit of.

In the past it was the custom with many to treat the channels of a fistula by local applications, or by injecting them with some caustic. So it was often the practice in the past to allow a rectal abscess to "break" instead of lancing it. With the passing away of the latter custom, so too, in the great majority of cases, will it be abandoned. A surgeon in this day, when the importance of *free drainage* is understood, must be held responsible for delay in

cases where pus is to be dealt with. In a word, then, I would discountenance prolonged attempts to heal fistulous sinuses by temporizing with the injection or local-treatment plan. Beside the failure to effect a cure, they cause delay which may be of serious import to the patient. By taking the division that I gave of fistula in the last issue, viz., *progressive* and *non-progressive*, the surgeons will be better able to decide whether an immediate operation is necessary or not. Granting, then, that it is decided to operate, which is the best plan?

Do NOT be misled by the advertisements of charlatans that "fistula can be cured without the use of the knife, ligature, or caustics." This same class of pretenders never refuse to use the ligature and caustics when they deem it necessary. It is always best to deal fairly but emphatically with your patient. If you think it necessary to operate, say so. A less conservatism might cost you your reputation and the patient much distress. There are some small *unprogressive* fistulæ which may be healed by local treatment, but they are vastly in the minority.

A GREAT deal has been written upon the cure of fistula by the use of the elastic ligature; even so good an authority as Allingham is inclined to favor its use in many cases. That it has less to encourage than to discourage its application in these cases I believe you will agree after giving it a fair trial. But for the elucidation of both its use and the objections to the same, I will consider it first as a procedure in such cases. The majority of patients suffering from fistula will come pleading that they be cured "without the knife." They have been "coached" likely by some itinerant who has given them a mournful description of this method, and by lurid descriptions of his own manner of treatment. This class must be handled very gently and dextrously if you expect to gain their confidence. Can fistula be cured by the use of the elastic ligature? Yes, undoubtedly so, but the cases are exceptional. If a patient presents complaining of a fistula that is (especially) of long standing, and has shown no disposition to progress (non-progressive), and you have reason

to believe that only one sinus exist, then the ligature can with safety be used. Yet if it prove true that more than one sinus existed the treatment will prove a failure. It has long since been demonstrated that the inflammatory exudate caused by the disease of the main sinus of a fistula will not cause the obliteration of any remaining sinuses. How, then, are you to know that only *one* sinus exists. I regard it as impossible to do so; but you will have to proceed after the discovery according to the old saying, "If at first you don't succeed, try, try again." This may suit the nursery, but is "out of joint" in surgical practice.

It will take from ten days to three weeks for the ligature to cut through the amount of tissue that it embraces. The knife would cut through it in less than a minute. It is said in its favor that the patient will not be detained from business, and that the pain is *nil*. I have never yet used the ligature that the patient did not complain of a great deal of pain, and that, too, until it had cut through. The pain attending the use of the knife in such cases rarely extends over a few hours. But, outside of this, what surgeon, knowing the damages of pus and wishing to secure perfect cleanliness in all wounds, would wish to see his patient straddling about for several weeks, his garments and person continually stained by the exuding pus during the time that it took the ligature to do its work? As one advantage over the knife it is said that no hemorrhage takes place. What surgeon cares for the little hemorrhage that might occur during the operation for fistula? The parts are laid plainly open, and the bleeding vessel can be easily secured. Indeed it is the rarest occurrence that I tie a vessel in these operations, as pressure alone stops all bleeding. The ligature taking from two to three weeks to make a division of the tissues, and the knife doing the same in a few minutes, this difference in time—two or three weeks—must represent the difference in the healing process of the two operations —the knife and the ligature.

If the physician has determined that his case is a suitable one for the ligature, how is it best applied? Many devices have been

used for carrying the rubber cord through the channel. Allingham's is about the best, though a little complicated. I have tried a number of them, but am persuaded that a simple way will suffice. Take a strong, flexible probe with an islet in one end; through this put the ligature. Then inserting the probe through the fistulous sinus, catch the distal end on the forefinger, introduced into the rectum, and withdraw through the anus. It sometimes becomes a matter of some concern how to attach the ligature in order to have it exert sufficient pressure to cut through the tissue. The device of Allingham is the very best for this purpose. Take a large bullet, flatten it, cut a hole in its center large enough to admit both ends of the ligature, then pull the ends and push the bullet up until it fits nicely against the parts. The cords should be exerted by sufficient strength to thoroughly stretch them, then clasp the bullet tightly with a pair of stout forceps. If pulled sufficiently tight it will cut through an inch of tissue with again tightening it. If, however, it becomes loosened in the cutting process it is to be made firm again by preparing a bullet in the manner described, then cut into one side of it and slip it over the ligature and compress. After the ligature cuts through, the wound must be managed as any other granulating surface. Before it does so, as much cleanliness must be observed as possible. In my next task I will contrast this method with the knife, and with the operation as done by Mathews' fistulatome.

With Our Exchanges.

DISEASES OF THE RECTUM.

GAY, GEO. W., BOSTON: MALIGNANT DISEASE OF THE RECTUM. (*Boston Medical and Surgical Journal.*)

The first point to receive consideration is the diagnosis, which should never be made from subjective symptoms alone. The external parts should be carefully inspected, and the finger carried up the rectum as far as possible. Except in very thin people with lax tissues it is not possible to make a thorough and satisfactory examination of the pelvic organs without an anesthetic, and this rule is essentially true as regards affections of the rectum. With the patient under ether in the lithotomy position the sphincters are to be thoroughly stretched and the rectum cleared by an enema if necessary.

With a Sims speculum and a horizontal light a good view can be obtained of from four to six inches of the lower part of the rectum, which is the location of nine tenths of its lesions. Bougies, sounds, and catheters are of little use in making a diagnosis of stricture of the rectum. They impinge upon the promontory of the sacrum or get caught in a fold of the mucous membrane, thereby giving untrustworthy evidence as to the true condition of the part. The finger is the only reliable sound, and the diagnosis of those rather rare strictures located above its reach is to be made from the symptoms, such as colic, abdominal distension, etc.

When a digital examination reveals a hard, nodular mass in the rectum, more or less immovable, involving the mucous, submucous, and adjacent structures, and encroaching upon the lumen of the bowel, there can be little doubt as to the malignant character of the disease. Malignant disease at the anus resembles epithelial growths in other regions of the body, presenting an ulcerated surface with or without an upgrowth, and having a hard, indurated base.

A broad and general distinction between malignant and specific disease of the lower bowel is that the latter involves the

anus while the former is located higher up, so that oftentimes an area of healthy mucous membrane separates the disease from the sphincters.

The treatment of malignant disease of the rectum is palliative or radical, the treatment being considered under three heads, namely, the alterative, the opium, and the operative methods.

Cripps' and Kraske's operations are mentioned for the removal of the growth and colotomy, the latter being indicated to relieve obstructive colic, and it should be done early to save the patient's strength.

TUTTLE, J. P.: THE MODERN TREATMENT OF HEMORRHOIDS. (*New York Medical Journal.*)

The author states "that hemorrhoids can rarely be cured without an operation is far from the truth; equally so is the doctrine disseminated by quacks and advertising specialists that the disease can always be cured without surgical interference."

External hemorrhoids are those developing outside of the external sphincter muscle and clearly in view; they are also those originating in the inferior and middle hemorrhoidal vessels, and are therefore connected with the general circulation. Internal hemorrhoids are those out of view, inside of the external sphincter; they develop from the interior or superior hemorrhoidal vessels, and are connected with the portal circulation.

External hemorrhoids he classifies as thrombotic, varicose, inflammatory, and connective-tissue piles.

The thrombotic variety is treated by laying the tumor open under cocaine or local ether anesthesia.

The varicose variety rarely demands an operation; regulation of the bowels, short time at stool, ice-water application, and the following astringent ointment:

℞ Ung. belladon.,
Ung. stramonii,
Ung. ac. tannici, } āā.....ʒi. M.

Four minims of Shuford's solution can be injected into the varicosities.

Inflammatory external piles are composed of distended arteries and veins and considerable connective tissue, with more or less serous effusion. The radical or operative, the palliative or antiphlogistic methods of treatment may be tried. Cocaine anesthesia

used in operation, preferably cold applications, with 50 per cent. of hamamelis added to the water thus used adds to its efficacy. Watch for secondary bleeding after cocaine is used.

Internal hemorrhoids he classifies into capillary or nevoid and varicose internal hemorrhoids.

The hemorrhage in the capillary variety will be found to occur from a sulcus at the point of junction with the normal mucous membrane. To these the author applies an electro-cautery by a round platinum electrode.

He states that the injection treatment has its field in simple internal varicose hemorrhoids, and uses a modified Shuford's solution, as follows:

℞ Ac. carbolici ..... f℥iss;
Ac. salicylici ..... ℥ss;
Sodii Biborat ..... ℥i;
Glycerini ..... ad f℥i. M.

Inject not more than four drops, and exercise care as to antisepsis, using this weak solution.

Sturgis, F. R., New York: Rectal Affections as a Cause of Sexual Debility in the Male. (*Gaillard's Medical Journal*, April, 1894.)

An affection of the rectum, whether it be hemorrhoids, which is not an uncommon cause of temporary debility, but long and deep fissures of the anus, which by irritation will produce reflex irritation of the urethra, and so result in premature emissions, and in some rare cases will induce a weakening and lessening of the powers of erection.

Green, C. M., Boston: Recto-Vulvar Fistula. (*Boston Medical and Surgical Journal*, April 12, 1894.)

The patient, aged thirty-two, single, had suffered more or less with hemorrhoids, and twelve months previously had been operated on for the cure of a fistula in ano. Since, there had been soreness about the vulva, and also with incontinence of intestinal gases and semi-liquid discharges. A short fistulous tract was found extending from the lower border of the sphincter ani to an opening about two inches to the left of the anus. The sphincter was entirely laid open at its upper left border, and a gaping sulcus extended from this point upward toward the left, along the inner

border of the left labium majus to a point opposite the lower third of the left labium minus. There was a small button-hole opening through the left nympha; the hymen was intact. The symptoms and lesions presented were essentially those of a complete rupture of the perineum, although the vagina was in no way involved. The condition present in all probability resulted from the laying open of a fistula extending from within the sphincter upward and to the left between the labia, which had failed to unite. An operation was done to restore the integrity of the parts; the rectum being closed in with catgut sutures, the sulcus above with silver wire.

The author suggests the treatment advised by Dr. E. W. Jenks, of Detroit, when a recto-vulvar fistula is operated on primarily, that of laying open the sinus, incising at right angles to the fibers of the sphincter, dissecting away all abnormal tissues, closing the sulcus with buried sutures passed around the fistulous tract, the sphincter closed as in a case of complete rupture of the perineum.

Quénsee: The Causation of Hemorrhoids. (*Rev. de Chir.; Pacific Medical Journal*, March, 1894.)

Hemorrhoids are made up of varicose changes not in one or two veins, but from a number of smaller branches and capillaries in the mucous membrane, the sub-mucosa, and also in the muscularis; their changes are due to injuries to the walls, to an inflammation of the inner wall, which reaches by contiguity the surrounding structures. The arteries do not participate in this. Not until the vessels, either from an inflow of alcohol, gout, or rheumatism, etc., or through the direct influence of micro-organisms from the intestine, are attacked and the inflammation by these means deprives their walls of their elasticity, can an increase of blood pressure cause their dilatation, lengthening, and varicose condition.

Eliot, Llewellyn: The Treatment of Hemorrhoids by Injection. (*Virginia Medical Monthly.*)

Before any treatment for internal hemorrhoids is adopted it is absolutely essential that the bowel be well cleansed. This may be done with calomel, sulphate of magnesia, or enema. Any method which cures without knife, ligature, or cautery takes the

public eye, and it is owing to the dread of an operation that the method of injection owes its existence.

Notwithstanding all the testimony which has been brought forward against the injection method, I have failed to have a single bad result from its employment. In every case I have injected hemorrhoids there has been a cure, as permanent and as positive as any result may be called a cure; the hemorrhoids have, as an invariable rule, disappeared, nor has there been a single recurrence of the tumor.

There are many formulas for employment in injection. Those which have given me most satisfactory results are: carbolic acid in glycerine and water of a strength of 12, 15, 33, 50, 95 per cent.

Fld. ext. ergot,
Sol. acid carbolic, 95 per cent., } āā.....ʒj.

A solution of carbolic acid in sperm oil, 1 to 2 or 1 to 4.

Tannic acid .....1 part;
Carbolic acid .....2 parts;
Alcohol .....4 parts;
Glycerine opt. .....8 parts. M.

The solution used in the Brinkerhoff treatment, I am informed, has the following formula:

℞ Carbolic acid .....ℨj;
Olive oil .....ℨv;
Chloride of zinc .....gr. viij. M.

The Hoyt formula, so I have been told by one of the parties who was cured by Hoyt, is carbolic acid and glycerine, equal parts, diluted with six times its volume of water, a few drops being used. Hoyt claims there is not a hemorrhoidal case possible but what can be obliterated by this means; that he has used it for fifteen years in about five thousand cases, and he does not believe a more simple or satisfactory means of cure could be devised.

Now, taking the figures of Andrews, 3,304 cases with 13 deaths, the mortality percentage will be .0039+; adding 171, or the number of accidents, we will have 184 cases, or a percentage of .052+ for combined deaths and accidents; this nearly tallies with the statement of Hoyt.

To inject hemorrhoids it is necessary to draw them well down, using cocaine anesthesia if desired; as the sphincter is well-dilated, this is an easy matter. The needle, not too fine nor too sharp, is thrust into the pile and the solution driven in. I have never limited my injection to a few drops, and have always injected all the tumors at one time. The pain is sometimes great, requiring morphia. Vaseline is freely used, and the tumors returned to the bowel. Bleeding has never occurred. A slough forms in three or four days, and is cast off, when we will find upon examination a clean surface, and that there is no evidence of a pile.

In the cases which I have treated rarely has it been necessary for the patient to remain in bed more than twenty-four hours. Usually, they are about their rooms sooner.

Cripps, Harrison: Dangers of the Long Rectal Tube. (*British Medical Journal*, No. 1723.)

Traditions die hard, and notwithstanding the condemnation of the long rectal tube by Brodie, Treves, and many other eminent authorities, I still find that in most cases of obstruction or supposed obstruction the tube has been introduced. Fortunately these tubes are fairly soft, so that in a capacious rectum, when they impinge and are arrested about opposite the promontory of the sacrum, they simply coil up and do no harm. If stiffer ones are used the patient's life is placed in imminent risk. A patient at St. Bartholomew's Hospital was to be operated on for ruptured perineum. In order to increase the supposed efficacy of the injection, a quart of soap and water, with some ounces of oil, were injected by means of a long tube. The injection never returned. A few hours afterward, owing to the acute symptoms of the patient, I assisted one of my colleagues in opening the abdomen. The soap and water and oil we found in the abdominal cavity, and a hole below a reduplicated fold in the upper part of the rectum. The patient died. The idea that these tubes can be generally passed into and beyond the sigmoid flexure is a pure delusion, save in the rarest circumstances. As a means of diagnosis, or of treating strictures beyond the reach of the finger, tubes of any kind are absolutely useless. If a stricture is actually present, it would be 100 to 1 against the long tube or bougie entering it, for it would almost certainly

catch in the *cul-de-sac* generally caused by the invagination of the stricture. If a stricture be not present, the arrest of the bougie by the sacral promontory leads to delusive diagnosis. Brodie, in his lectures, alludes to a case in which a worthy practitioner had spent over one hundred and fifty hours in dilating a supposed stricture situated high up. The treatment had extended over a period of a year. Brodie, who was present at the *post-mortem* examination, found there was no sign of a stricture, the bougie becoming arrested by the curve of the sacrum.

HEINEKE, V.: THE OPERATION FOR CARCINOMA OF THE RECTUM. (*Münch. Med. Wochen.; American Medical and Surgical Bulletin.*)

In this operation Heineke has made great progress within the last year. The skin incision runs now always along the middle of the sacrum. The thighs are strongly flexed, the sphincter is cut through, the gut disinfected thoroughly, and the incision carried down to and the coccyx sawed through in the middle. Then follows separation of the ligaments from the coccyx and sacrum and chiselling off of the sacrum at the fourth foramen. Heineke cuts off the gut close to the sphincter, ties it, and separates it in the ordinary manner, until the portion above the carcinoma can be pulled out through the anus. The gut is now cut off gradually about one centimeter above the upper limit of the cancer and sutured to the outer surface of the anus. Suture of the sphincter and of the wound to the middle of the sacrum, the upper part remaining open and being tamponed. It is important that the rectum be sutured only to the external surface to avoid kinking. For this same reason Heineke never sutures the peritoneum. He further lays great stress on cutting the sphincters.

JENKINS, W. T., ALBANY, N. Y.: PECULIAR CASE OF FOREIGN BODY IN THE RECTUM. (*New York Medical Journal.*)

Patient, thirty-three years old, a male, was attacked by four tramps, who, becoming enraged at him, knocked him down and forced a potato and turnip up his rectum. Digital examination revealed a foreign body about four inches from the anus, which could readily be seen through a speculum. A vulsella forceps was inserted and it was brought down to the sphincter, which

contracted so strongly as to prevent its being withdrawn. Under ether the body was withdrawn. The large end of the turnip was hollowed out and a hole bored through the root. A hole was also bored through the potato, and a stout string passed through it and through the turnip; thus the potato was drawn down into the turnip. The string was tied and cut off. In its bipolar circumference the mass measured ten and one half inches, and it was eight inches round. The large end was introduced first.

Reclus: The Treatment of Hemorrhoids. (*Gaz. de Hôpitaux; University Medical Magazine.*)

The author speaks of the use of hot water for the relief of painful hemorrhoidal tumors. Tampons, wet with a two-per-cent. cocaine solution, should be kept in contact with the anus. In order to give a more certain relief the anus should be dilated with a bivalve speculum, with or without anesthesia. A tampon wet with a two-per-cent. cocaine solution is inserted in the ampulla recti for two or three minutes. An injection of a one-per-cent. solution of cocaine is made directly into the substance of the sphincter muscle. The speculum is then introduced and maximum dilatation made.

Reclus has treated sixty cases after this method with only one failure. The relief was absolute, and the condition did not return. The author has never seen any disagreeable or dangerous symptoms result from this treatment. If it is thought likely that there will be a return of the trouble, the pile tumors should be cut off with cocaine anesthesia.

Wright, J. S.: A New Operation for Piles. (*Medical and Surgical Reporter.*)

The instruments required are, a pair of tenaculum forceps, a strong curved needle, a pair of pressure forceps with slightly curved jaws that are about four centimeters in length, and a pair of scissors curved on the flat.

The pile is gently drawn down with the tenaculum forceps and then clamped with the pressure forceps. All that part of the pile below and outside the pressure forceps is cut off evenly with the scissors; a knife may be substituted for the scissors. The needle is armed with a catgut suture of proper strength, and the

suture is carried around and above the jaws of the pressure forceps so as to embrace and include all the stump of the cut-off pile; that is, the suture is a continuous one. One end of the suture projects from one border of the pile stump and the other end projects from the other border. The ends of the suture are now put together in the first step of the surgeon's knot. Then the pressure forceps are unlocked and gently removed, being extracted from the loops of the continuous suture, which is at once drawn tight and the tying completed. If these movements are well executed there will be no hemorrhage, the wound made by the excision of the pile being securely closed. Each pile, in its turn, is dealt with in the same manner, the pressure forceps being applied in such direction as the judgment of the operator may dictate.

This method of operating has the following advantages: (1) Easy and rapid work; (2) absence of hemorrhage; (3) complete excision of the piles; (4) the suture-ligatures take care of themselves; (5) repair with a small quantity of scar-tissue; (6) the patient can get out of bed in a few days; (7) a good result is quickly obtained.

Beck, Carl: Value of an Ethereal Solution of Iodoform in the Treatment of Hemorrhoids. (*New York Medical Journal.*)

After having prepared the patient by cleansing the bowels thoroughly with repeated irrigations of a solution of salicylic acid about fifteen minutes before the operation, a suppository containing two grains of cocaine and from a quarter to a third of a grain of morphine is introduced into the rectum. If the patient is extremely sensitive at the beginning of the operation a one-per-cent. solution of cocaine should be injected into different portions of the mucous membrane, but practically I have never found this necessary. It may predispose the patient to hemorrhage. After the introduction of an iodoform gauze tampon through a small speculum the tumors are brought into view without grasping them with the forceps. Two drops of a saturated solution of iodoform in ether are then injected into the cellular tissue adjoining each nodule. Injecting this on both sides of the latter causes a formation of scar tissue and a shrinking of the circumvenous tissue.

If the cocaine-morphine suppository has been introduced at the proper time the pain following this procedure is very slight and passes away in a few moments.

In place of the gauze tampon a suppository containing two grains of salicylic acid is now substituted, and bismuth and opium are now given to prevent a movement of the bowels. On the third day two ounces of olive oil are injected into the rectum, and castor oil is given *per os.* During the subsequent weeks great care should be taken to keep the bowels loose.

This operation does not prevent the patient from attending to his daily work. I have not observed any bad effects, such as sepsis, abscess, ulceration, embolus, hemorrhage, and stricture or fistula, and no relapse has yet occurred in any of my cases. If no obliteration, but contraction, should take place in a large hemorrhoid I would repeat the operation.

The following advantages are to be derived from the injection of iodoform dissolved in ether: (1) The operation can be performed without assistance, thus materially lessening the expense, which to many patients is an important item. (2) Iodoform, being a strong antiseptic, is certainly fitted to prevent suppuration, probably sepsis, and differs considerably from the much-used carbolic acid, which, if employed in the requisite strength, acts as a caustic. (3) As the nodules themselves are not touched, but only the circumvenous tissue, it is evident that embolism, which follows the use of carbolic acid and other liquids, can not occur. (4) No contraction takes place, such as follows the use of the cautery. (5) The patient can resume his work at once.

Rucker, G. R., Indian Territory: Treatment of Hemorrhoids. (*Kansas City Medical Index.*)

In treating hemorrhoids a physician must have enough stamina to stand by his decision. If the patient will not let him do what seems best, let him go, for no physician will do any good by letting patients have their own way, in these cases especially. The ligature and the clamp and cautery are now recognized as being the safest and surest means of treating large internal hemorrhoids. Strong nitric acid applied to the strawberry variety will soon cure that. The hypodermic injection of carbolic acid has been shown to be unreliable and adapted to only a few cases, and Whitehead's

operation is so bloody and so hard to perform by most surgeons with satisfactory results that it can not be called a satisfactory operation. I believe most surgeons prefer the ligature because it is easily applied, safe as far as a surgical operation can be, and is very effective. There are some few draw-backs, such as a good deal of pain afterward with vesical tenesmus, but such do not amount to very much.

Personally I believe I prefer the clamp and cautery, because it is easy, quick of execution, clean, leaving a perfectly aseptic surface, and causes much less pain and tenesmus than the ligature. It is also free from being a bloody operation, for in fact no blood escapes. If care has been taken to cauterize the stump well there will be no more danger from secondary hemorrhage than from the ligature.

STEVENS, EDW. S.: THE BEST TREATMENT OF HEMORRHOIDS. (*Cincinnati Lancet Clinic.*)

If the cases seen by the practitioner are sufficiently numerous to justify him in providing himself with the necessary instruments he will find the clamp and cautery method of treatment an ideal one, and it has not been intended to prefer the ligature to it without some qualification of the statement of preference. While not so simple of performance, it is followed by less distress and recovery is usually more speedy after it than after the ligature. The surgeon who permits his patients to walk out on the fourth day, however, as has been reported, does not decide for their best interest. A week or ten days should elapse, unless an examination shows the wounds healed. If resorted to, two or three precautions are best heeded. Do not use it on tumors high up in the rectum. Open the clamp slowly, and if there is any tendency to bleed screw up the clamp and again apply the cautery. The cautery is sufficiently hot when dull red, and the part of the stump to which attention should be paid in applying the cautery is that farthest from the operator, that is, where the vessels enter.

Before either operation see that the bowels are thoroughly emptied, and after it introduce an opium suppository.

There are one or two other methods advised, but they are not all that could be desired. One of them, called after the name of an eminent English surgeon, consisting in excision of the "whole of the pile-producing area," deserves to be forgotten, not because it is not simple, but because it is not safe.

A form of hemorrhoidal disease characterized by sessile granulations which bleed easily is best treated by the very old method of applying nitric acid. Introduce a speculum, dry the parts with gauze, and touch the whole granular surface again and again with a bit of cotton moistened with the acid, but containing so little that it will not run over the parts not diseased.

Lastly, before beginning any treatment look out for complications. Especially in women should the pelvic organs other than the rectum be examined. In children examine the urinary organs.

ALLISON, CHARLES C., OMAHA: ULCERATION OF THE RECTUM. (*St. Joseph Medical Herald.*)

The following conclusions as to treatment are given: The most logical steps in the treatment are those directed toward attaining the repair of the same condition in other parts of the body, and they may be included in the surgically attractive word, *rest.* This may be gained:

1. By emptying the bowel and overcoming obstruction in the portal circulation.

2. By a dietary plan which leaves little residue in the canal. For this purpose fluids are selected, the ideal choice probably being boiled milk.

3. By the exhibition of some medicament which is at the same time protective to the mucous membrane and sedative to peristalsis. Bismuth and codeine act well in these indications.

4. By position. This is more important than any other factor, in that we can assist the return circulation by a recumbent position, and thus overcome the leading predisposing cause of the disease. Not only do we overcome gravity and tenesmus in this manner, but we also prevent attrition of the delicate area, which is imperative in any movements of the body on account of the loosely attached mucous membrane, the floating levator, and the rigid sphincter.

5. By the removal of irritating factors, as polypi, internal piles, and unskillfully administered enema. Under this caption I would also recommend in cases of marked irritability, complete stretching of the sphincter and levator muscles. The levator is paralyzed by pulling downward, outward, and forward. When these muscles are thus relaxed, respiratory movements have less bearing on the outlet of the pelvis, and rest is more complete.

6. By the application of direct support to the varicose area by means of a rubber tube four or five inches long and three eights of an inch in diameter, well wrapped with iodoform gauze or boracic gauze incorporated with aristol, introduced into the bowel and allowed to remain under the above conditions from three to four days, when the application may be repeated.

This tampon-tube was suggested by Dr. Gerster as a dressing after operations for hemorrhoids, although I have never seen it recommended in the indication and manner just described. It serves as a support like the bandage to a leg, and gives an opportunity to apply asepsis and remedial stimulation to the ulcerative surface.

7. The use of the curette may occasionally be expedient, and the application of silver nitrate, carbonic acid, or pyrozone useful as cleaning, protective agents, but I would advise against ringing too many changes.

8. In extreme cases where reparative power is absent or the patient rebellious, it will be necessary to do an excision or a colotomy in order to secure absolute rest.

Green, W. O.: Systematic Anesthesia for Examination of the Rectum, Sigmoid Flexure, and Lower Colon. (*Am. Med. Surg. Bulletin.*)

In the majority of cases chloroform is probably the best agent that can be employed for the examination. It is rapid and more certain than ether in its action, and less apt to be followed by the extreme and prolonged neurosis which frequently gives rise to violent retching and straining.

The tenderness and spasm of the diseased anus and lower rectum may sometimes be overcome by the employment of cocaine, but this agent is not always reliable, and not infrequently it is directly contra-indicated, or it may be that the disease is in such a locality that the proper administration of cocaine would be thoroughly impracticable. A systematic anesthetic then may be employed with signal benefit. If the surgeon has been careful to elicit the symptoms, inspect the parts, and make a digital and speculum examination, in a large proportion of cases he may be led to suspect certain diseases which he can either verify or disprove by the use of an anesthetic. In a certain proportion of

cases the patients may decline treatment, the condition of the parts may not justify surgical measures, or the disease prove inoperable, when the surgeon can employ anesthesia only for diagnostical purposes.

Buckmaster, A. H.: Vaginal Anus and its Treatment. (*New York Medical Journal.*)

The term is chosen to designate those cases in which the rectum empties its contents through the vagina, and which have no opening through the usual position on the skin. A case occurring in the author's practice is reported which was operated upon successfully.

He divides the cases into two classes, those who have control, in whom a vaginal douche after each movement will generally suffice to keep the patient comfortable; and those who have no control, including the larger per cent. of cases.

After the introduction of a probe into the fistula from the vagina, and bringing out the point of this instrument just above the levator ani muscle, the tissue above the probe is divided.

The position of this incision is in front of the lower part of the sling formed by the fibers of the levator ani muscle, the skin being divided about an inch farther back.

Next, draw the rectum to the skin, which should be fastened without strain. If union of the rectum to any point of the skin is secured, no matter to how slight an extent, it is not difficult to bring the remainder of the circumference of the bowel in the desired position at a later period. The raw surfaces left at the sides of the rectum are sewed together.

The second step of the operation consists in forming that part of the pelvic floor which is usually known as the perineal body.

The third step consists in splitting the fibres of the levator ani muscle, as has been done with the rectus muscle in gastrostomy. If this latter is practicable, a fairly good sphincter should be obtained.

Davey: Pruritus Ani. (*British Medical Journal.*)

℞ Calomel.... .....ʒiss;
Cerati cetacei .....ʒi. M.

Make with less than the B. P. proportion of oil, stirring in calomel till cold. Sig: Local application.

GASTRO-INTESTINAL DISEASE.

HERTER, C. A.: OBSERVATIONS ON EXCESSIVE INTESTINAL PUTREFACTION. (*New York Medical Journal.*)

A paper by this title was read at the New York Academy of Medicine. The objects of the paper were, first, to present the evidence as to the existence of putrefactive processes; second, to enumerate and discuss the clinical conditions in which putrefaction occurred in excess; and, third, to state the principles that should enter into the management of such cases.

The author deduced the following conclusions as a result of his investigations:

1. An excess of the ethereal sulphates in the urine was evidence of excessive putrefaction of proteids in the intestines. There were two exceptions to this statement: first, in the case of suppuration without free drainage; second, where certain drugs, such as creosote and salol, had been administered.

2. The indigo blue of the urine was not necessarily proportional to the ethereal sulphates, and was to be regarded as due to a special form of putrefactive decomposition.

3. The regular occurrence of more than a trace of indigo blue was to be regarded as pathological, although in robust persons there might be very little evidence of disordered digestion for a time.

4. The presence of indigo blue in children was no evidence of the existence of a tuberculous process.

5. Intestinal flatulence was oftener associated with intestinal putrefaction than any other symptom of intestinal indigestion. Epigastric pain and tenderness, the sense of emptiness and nausea, bore no relation to the ethereal sulphates.

6. Both starvation and constipation might increase the putrefactive products in the urine.

7. Epilepsy, acute melancholia, and chronic Bright's disease were usually associated with excessive intestinal putrefaction.

8. The treatment of excessive intestinal putrefaction by means of drugs was at present unsatisfactory.

9. The use of rare beef and milk, and the exclusion as far as possible of vegetable nitrogenous food were important and effective means of reducing intestinal indigestion.

10. The relief of intestinal symptoms could not be ascribed wholly to the effects of a milk and beef diet, for such diets reduced the excess of uric acid, which was observed in many cases of intestinal indigestion.

11. The treatment of epilepsy by means directed to the intestinal condition led in many cases to a reduction in the number of the seizures, and to marked improvement in the general health.

12. It was probable that in some cases of epilepsy in children the early seizures were determined by intestinal derangement, and that certain treatment directed to the correction of putrefactive excess might greatly improve or even cure some cases of this kind—in the sense of preventing the establishment of the epileptic habit.

PICK: LARGE DOSES OF BISMUTH IN GASTRIC CATARRH. (*Berlin Klin. Woch.; Southern Clinic.*)

Objection is made to the small quantities of bismuth usually administered. He believes that the frequent failure of the drug is due to that fact. With doses of ten to twenty grains he estimates that a certain proportion does not reach the stomach for some time, being retained in the mouth, pharynx, and esophagus. This consideration, and the fact that bismuth is almost insoluble, and the danger of poisoning therefore very remote, led him to use, in chronic gastric catarrh, much larger doses than hitherto customary, and according to a method he has adopted for the last five years. In order to free the mucous membrane from adherent mucus, the patient takes in the morning, on an empty stomach, a teaspoonful or less of Carlsbad salt dissolved in about half a pint of warm water. Half an hour later he has a teaspoonful well heaped up of the subnitrate of bismuth administered in wafer paper—in two parts, the one after the other, as the quantity is rather large to swallow at once. The gastric region is now treated to massage for a short time, in order to bring the bismuth into as close apposition to the mucous membrane as possible, and half an hour after the dose breakfast is allowed to be taken. The diet is, of course, duly attended to. With this method of treatment Pick has obtained very favorable results in a large number of cases. Prominent symptoms, such as a feeling of distension, tenderness in the epigastrium, and

eructations, rapidly disappear, the coated tongue becomes clean, and increased appetite is established. In slight cases this has set in within eight days; in more severe cases a course of three or four weeks is necessary. No unpleasant after-effects of any description were observed.

HALDEMAN, F. D., ORD, NEB.: INTUSSUSCEPTION PUERPERIUM. (*Omaha Clinic.*)

In consulting the available literature on this subject, I conclude that acute intestinal obstruction, due to intussusception, and occurring during the puerperal state, is a condition which has been rarely noticed. Intussusception occurring during this period is easily mistaken for hematocele. In both we have the sudden onset, without warning, accompanied by violent abdominal pain, cramp-like in character, and followed immediately by profound nervous shock. There is deathly pallor, hiccough, nausea, vomiting, and a sense of helpless prostration. The patient usually tosses about, and in the intervals of quiet lies with the thighs flexed. The tumor may in either case be firm and unyielding, with about the same degree of tenderness.

The points of differential diagnosis are, symptoms of concealed hemorrhage, partial or complete syncope, the absence of absolute constipation, and the character of the tumor. The dilated condition of the anus in intussusception is considered to be almost a pathognomonic symptom, and is present even when the tumor is high up in the bowel.

Fecal impaction occasionally presents symptoms analogous to intestinal invagination. It gives rise to a tumor, vomiting, tenesmus, tympanites, and even protrusion of the intestine from the anus. These symptoms closely resemble intussusception, but in impaction the vomiting is not usually so obstinate, the tumor not so sensitive, can be indented by the finger, the point of obstruction is usually in the rectum, and copious enemas will cause the disappearance of the impaction. Again we do not get the rapid and great prostration that is observed in intussusception. Another point of difference is, that in invagination the position of the tumor changes, and it generally advances, while in impaction it remains stationary.

Typhlitis may present symptoms very closely simulating this

trouble, as the result of inflammation of the ileo-cecal valve. There may be vomiting, intestinal pain, tympanites, and obstinate constipation, which it is impossible oftentimes to overcome. The diagnosis in these cases is very difficult.

In typhlitis the tumor, which results from inflammation and infiltration, is in the right side, while in intussusception the tumor, when observed, is in the left iliac region or in the transverse colon. This is observed even when the invagination is ileo-cecal, because the smaller intestines roll into the larger until the tumor appears on the left side instead of the right.

In typhlitis we have a history of acute inflammation, not so in case of intussusception. Peritonitis will also frequently give rise to symptoms resembling those of intussusception. We have frequent vomiting, obstinate constipation, abdominal pain, and tympanites. In peritonitis we usually have the gradual onset of the disease, more sudden in cases of intussusception. In peritonitis we have the symptoms of acute inflammation existing for several days before we get the symptoms of obstruction. In intussusception the symptoms of obstruction and shock appear early. In peritonitis, although constipation is often obstinate, the vomiting is not as frequent and uncontrollable as in intussusception, nor do we have the rapid prostration in the former disease that is so characteristic of the latter.

There are other forms of obstruction, such as twisting of the intestine upon itself, pressure upon the intestine by a band of lymph, or strangulation of the intestine in congenital opening in the diaphragm.

Skinner, C. G. L.: Salol in Diarrhea. (*Medical Chronicle; Atlanta Medical and Surgical Journal.*)

Salol is a compound of phenol and salicylic acid, containing about forty per cent. of the former and sixty per cent. of the latter. It is insoluble in water. In acid media it undergoes no change, but in alkaline fluids, and also by the action of microorganisms, it readily splits up at the temperature of the body into phenol or carbolic acid and salicylic acid.

If, then, we give salol to a patient, it passes unchanged through the acid contents of the stomach, but on coming in contact with the alkaline pancreatic juice splits up into carbolic acid

and salicylic acid, which thus exert their full effects on the contents of the intestines, and we have the bowel washed out with an antiseptic solution. If we take into consideration that in diarrhea absorption in the bowel is no doubt less active than in health, and also that the micro-organisms which abound in the intestines aid us in compassing their own destruction by splitting up any of the salol which may have escaped the action of the pancreatic juice, I think we must admit that, theoretically at least, salol is more apt to give good antiseptic results than the other drugs more commonly prescribed. A further advantage is that a larger dose of carbolic acid can be given in the form of salol, owing to its non-absorption in the stomach, than if the drug itself is prescribed.

May not the local action of many other drugs on the interior of the alimentary canal be too much overlooked? Some years ago, in a paper on anemia, the late Sir Andrew Clark, after suggesting as the cause of the disease absorption of foul gases in the intestines, gives it as his opinion that the value of iron consists, not so much in restoring the red corpuscles, as in forming an astringent lotion to apply to the interior of the bowel, thus preventing the formation of these gases. Do modern therapeutist devote too much research to dilatation and contraction of capillaries and effects on nerve endings, and too little to the immediate action of drugs on the gastro-intestinal mucous membrane?

During an epidemic of summer diarrhea, of twenty-three cases treated with salol, only one, a child eight months old, proved fatal. In very few cases were more than three or four doses necessary, and rarely were more than one or two loose stools passed after taking the first. Ordinary catarrhal diarrhea, due to errors of diet, diarrhea of children, diarrhea occurring in the course of some other disease, two or three doses seldom fail to arrest, while in the diarrhea of tuberculosis it can generally be relied upon to give temporary relief. It has been recommended in typhoid fever, but I have no experience of its use in that disease, nor am I aware that it has been given in cholera; but it seems to be well worth a trial, and at least as likely to prove effectual as any drug yet employed.

In all these varieties of diarrhea the good effects of salol are most probably due entirely to its direct antiseptic action on the

bowel contents—destroying bacilli, controlling acid fermentation of food and the putrefactive processes. The sedative action of carbolic acid will also lessen the peristaltic movements, and so relieve pain. The dose of salol for an adult is ten to fifteen grains (best administered in a spoonful of gruel or barley water), which may be repeated every four or six hours; to a child a year old, one or two grains may be given. It is very rarely rejected by the stomach, and in the above doses does not produce unpleasant after-effects.

Strausz, P. H., Toledo, O.: Lavage in Treatment of Diseases of the Stomach. (*Medical and Surgical Reporter.*)

I have noticed from time to time articles in our medical journals on the treatment of dyspepsia, and have been surprised at the want of mention of one of the most important adjuncts to the treatment of almost all forms of stomach difficulty, viz., Lavage, as practiced by Dr. Dujardin-Beaumetz, of Paris, France.

I have for several years paid special attention to diseases of the alimentary canal, and have given much thought to washing the stomach, having in the last five years washed every case of chronic stomach trouble that has presented itself to me for treatment. In the first place, it seems to be the only rational means we have for a certain diagnosis of the character of disease the patient may have, for as all know the term dyspepsia conveys little if any meaning, being only a symptom of an organic disease.

I would like to give some of my experience with the straight tube. I always have my patient present him- or herself from four to six hours after having eaten, when I usually find the stomach free of all food. If, after trying to introduce my tube, there be much reflex irritation I at once introduce about one ounce of a saturated solution of calcium sulphide to reduce this state, which it does. After having filled the stomach about one third full of plain water, at a temperature of about 112° F., I syphon this first water off into a clean vessel, saving this result for diagnostic purposes. I continue to use plain water till the water returns through the syphon as clear as when introduced into the stomach. I then make my examination of the first liquid, and usually diagnose my case from that.

I have treated many cases of ulceration of the stomach, with the most gratifying result both to the patient and myself, by using in these cases first a solution of resorcin, washing thoroughly with this aseptic water, after which I use about one dram of bismuth subnitrate to a pint of water, letting this water remain in the stomach about two minutes and then syphoning it off, thereby coating an aseptic sore with the bismuth.

In atonic dyspepsia, when the muscular walls are so much relaxed as to hardly perform any function, the continued ingestion of hot water seems to impart to them a stimulation, and with the addition of large doses of strychnia sul. will regenerate an almost worn-out stomach.

I have had case after case of catarrh of the stomach where the mucous glands have been stimulated to such an extent that their secretion overrides all others, and where I have been able to syphon at my first washing not less than one pint of a thick, viscid mucus, so heavy that it sinks to the bottom of the receptacle like lead. Almost complete relief is given in these cases by the employment of an antiseptic wash, followed by the use of arsenate of copper in $\frac{1}{100}$-grain doses each morning, taken in a glass of hot water. This form of dyspepsia is the most common and persistent that will come to the physician, and requires great patience on the part of both physician and patient.

Another very prevalent form of dyspepsia is what is known as putrid indigestion, where the patient's stomach fills with the accumulating gases of putrefaction and causes not only pain to himself but disgust to his friends who are unfortunate enough to be associated with him. In this form it has been my custom to use a solution of permanganate of potash until the reflex shows the entire absence of organic matter in the stomach, which will occur after the injection of about one gallon of water.

I could go on and mention the different forms of disease of this most important organ treated by lavage with proper medication, but hardly think it worth while, as I leave it to the physician to use his own judgment as to what is required in each form. What I wish to impress is that the unpopularity of this method of treatment of disease of the stomach is due to the fact that almost all practitioners use the same solution in every case that presents itself, whereas each form of dyspepsia requires a sepa-

rate and distinct form of medication, as does any other disease. If the physician will first of all diagnose his case, his own knowledge of medicine will indicate the treatment required, and I can assure him, after an experience of many years, that the results will prove satisfactory.

Morse, T. H.: Ruptured Gastric Ulcer Successfully Treated by Abdominal Section and Suture. (*British Medical Journal*, 1733.)

The patient, a young lady aged twenty, having had symptoms of gastric ulcer, was suddenly seized with pain, followed by faintness and vomiting. The pain, which was of a burning character, commenced over the region of the stomach and gradually extended all over the abdomen. Abdominal section was performed nearly five hours after the commencement of symptoms; the contents of the stomach were found in the peritoneal cavity. The stomach was withdrawn, and a perforation found on the anterior surface close to the cardiac orifice. The organ was washed out and the perforation closed with Lembert's sutures; the stomach was returned, the peritoneal cavity washed out, and the wound united. No food was given by the mouth for sixty hours, and at the end of three weeks the patient was quite well. The author had not up to the present time seen a record of any other successful case of this kind in this country, though cases had been reported by Drs. Penrose and Dickinson, also by Mr. Gilord and Mr. Barling, and by Mr. Warrington Haward, references to which were to be found in the *British Medical Journal* of the past year.

Mr. Barwell, in the discussion, said that he had been able to find twenty-five cases on record of closing a rupture in the stomach wall, and there were at least four others. In one of the twenty-five cases there was a localized abscess close to the small curvature; this abscess was opened, and that was all that was found to be necessary. He then described Kriege's case. Mr. Barwell suggested the following points, which he thought might point the way to success: First, to operate as soon as possible; secondly, that the incision through the abdominal wall should be to the left of the middle line; thirdly, to search very thoroughly the front wall of the stomach, as in these cases the opening was

for various reasons liable to be hidden by lymph, puckering, etc. He suggested that it might be advisable to introduce into the patient's stomach some colored fluid, such as coffee, for this purpose. He could not agree with Mr. Haward that it was necessary to cut away the margin of the ulcer before suturing the stomach. He thought that Mr. Morse had done very wisely in washing out the stomach, and also in eschewing antiseptics in washing out the peritoneum. Mr. Barwell had seen very good results in washing out the peritoneum with warm distilled water in restoring patients from collapse during abdominal operations.

Lockwood, C. B.: Resection and Immediate Suture of Intestine which had been Strangulated Eighty-one Hours; Recovery. (*British Medical Journal*, 1733.)

This was the first case in which the author had had the opportunity of practicing resection of intestine damaged by strangulation since he advocated that treatment in a communication to the Royal Medical and Chirurgical Society in 1891, now printed in their *Transactions*. The case had a claim to attention because it seemed that none other had been successful after such a long strangulation as eighty-one hours. The patient was a youth, aged seventeen, who was seized suddenly with symptoms of acute intestinal obstruction, due to a strangulated inguinal hernia. Taxis had been tried, and kelotomy was done eighty-one hours after strangulation had begun. The loop of intestine was rough and macerated, deeply engorged and infiltrated with blood, and gangrenous and perforated at the seat of constriction. About four inches were resected, and the ends united by Czerny-Lembert's method, and the wound drained and closed. An uninterrupted recovery ensued. The reasons for choosing resection in preference to the formation of an artificial anus were given. The former had a smaller mortality; and the latter exposed the patient to (1) non-relief of the obstruction, (2) spread of the gangrene or ulceration, (3) spread of the septic peritonitis, (4) death from inanition, (5) a further operation for the closure of the artificial anus. The reasons for requiring the Czerny-Lembert method in preference to methods which required unusual apparatus were stated. Lastly, the factors which conduced to success were mentioned, namely, the care taken to avoid death from shock by the

cessation of the anesthetic; the application of warmth and stimlants, and speed in operating; the disinfection of the sac, and protection of the peritoneum from infection; and lastly, the absence of intestinal paralysis at the time of operating.

Mr. Treves also congratulated Mr. Lockwood. He pointed out that the statistics of primary resection and the formation of an artificial anus were liable to be fallacious, from the fact that all successful resections were published, whereas he did not expect that all the successful cases of the other class had been recorded. Primary resection was a plastic operation, and he doubted if it was advisable to subject patients with a gangrene of the gut to an operation of this character. Owing to the differences of the gut above and below the strangulated loop the operation was an extremely difficult one. In his own experience the best results had been obtained by a secondary resection a fortnight or three weeks after the first operation of making an artificial anus. It was a good sign that bone plates and other apparatus were being discarded, and that the pieces of intestine were now joined in the ordinary way by sewing them together.

Wood, A. Jeffreys: Intussusception; Reduction by Air and Water; Recovery. (*Australian Medical Journal.*)

The patient, aged six months, was a well-nourished male child; was brought to the Children's Hospital on March 10, 1892, with the following history:

Quite well up to March 8th, when he became fretful and had two green motions during the day. At 8 P. M. he began to vomit and scream, and continued to do so all night. About midnight an enema of soap and water was administered, followed by a very small bloodless motion; but the screaming and vomiting were not relieved. On the 9th he was seen by a medical man, who gave him two grains of grey powder, and at 4 P. M. the child passed some blood and mucus. During the night of the 9th the screaming and vomiting continued, only half an hour's sleep being secured during the whole night. The screaming was associated with drawing the legs up on to the abdomen and rolling the head from side to side. The vomiting continued every five or ten minutes all through the night.

When seen at the hospital the child's face was pale and sunken,

with a pained, anxious expression. The abdomen was not tense, and manipulation was effected without much resistance. A small sausage-shaped tumor was found in the right hypochondrium, about two inches below the right costal margin. Nothing could be felt *per anum*.

A diagnosis of intussusception was made on the facts that the child had been screaming, vomiting, and sleepless for thirty-six hours, during which time only a slight trace of fecal matter had been seen after an enema; and also that blood and mucus were being passed during the straining efforts of the child. The sausage-shaped tumor confirmed the diagnosis.

The child was anesthetized by Dr. Mackay, and with the buttocks raised on a pillow air was pumped into the rectum by means of a Higginson's syringe, a plug of wet absorbent wool being kept closely pressed against the shield of the bone nozzle of the syringe to prevent the escape of air by the anus. The large intestine filled very quickly with air, and as it filled deep massage was done over the site of the tumor. In about five minutes the tumor had disappeared, and in order to be quite sure of an absolute reduction, warm water was run into the bowel with a funnel attached to a Jacques' No. 16 catheter, and the water as it came back was seen to be stained yellow. About a quart of water was thus run into the bowel, the child's buttocks being well raised at the same time. An hour later a small yellowish motion was passed, accompanied by flatus. On palpating the abdomen the muscles on the right side seemed to be somewhat *en guarde*. The child was quiet and sleeping soundly.

March 11. Child had seven motions during the night, stools offensive and green, but without any sign of blood. He vomited slightly each time his bowels were moved. This morning the bowels have been moved once without any vomiting.

March 15. Child well; bowels regular, abdomen lax.

Cayley: Sutton: Excision in Typhoid Perforation. (*British Medical Journal*, 1733.)

The patient, a man aged twenty-five, was seized with symptoms of perforation about the twenty-fourth day of what seemed to be a mild attack of typhoid fever. The conditions appeared favorable for operative interference. Accordingly, five and a

half hours after the accession of the symptoms, the collapse having passed off, Mr. Bland Sutton, assisted by Dr. Berkley, opened the abdomen. On withdrawing a coil of intestine from the pelvis a perforation was found in the center of an oval ulcer, the outline of which was plainly apparent through the intestinal wall. The ulcer was excised by an oval incision, and the cut edges of the mucous membrane drawn into apposition by a continuous silk suture. Then the serous surfaces were brought together by eleven Lembert sutures, the peritoneal cavity freely irrigated with warm water, and the stitched portion of the gut laid immediately under the wound in the abdominal wall, which was then closed in the usual manner. At the end of the operation, which lasted nearly an hour, the patient was much collapsed, but gradually rallied and lived till the sixth day. He suffered no pain, and there were no signs of peritonitis. The sutured section of bowel was found adherent to the edges of the incision through the abdominal wall. The perforation was situated twelve inches above the ileo-cecal valve. In any future attempt it would probably be better not to excise and suture the ulcer, but, after washing out the peritoneal cavity, to attach the perforated bowel to the abdominal incision and leave a fistula, which could be dealt with subsequently.

Mr. H. Allingham had had a case of the kind in which the openings in the bowel were so rotten that he brought them up to the abdominal opening and stitched them there, but the patient died.

Ekehorn, G.: The Bacterium Coli Commune a Cause of Appendicitis. (*Lakareforenings forhandlinger; Canadian Practitioner.*)

The primary changes in appendicitis—the catarrh and subsequent thickening of the mucous membrane and of the walls of the appendix—are the same in degree and frequency, whether fecal matter be present or not; they are not, therefore, dependent upon the latter, and we can not with reason infer that the presence or absence of fecal matter has any causal relation with them from our present knowledge. If we admit that virulent bacteria may, after gaining entrance within the processus vermiformis, induce these primary changes and cause a catarrhal in-

flammation with intense swelling, edema, and infiltration of the appendical wall, it is strictly in accordance with our experience of their behavior in other parts of the human organism. The correctness of this supposition, which may in the near future be verified by experimental evidence, has not as yet been proven.

In an appendix thus pathologically affected fecal matter may, through its presence, acquire grave secondary importance as touching the course of the appendicitis, partly through its pressure upon the edematous, infiltrated wall, in this way becoming a secondary cause of ulceration, gangrene, and perforation, and partly through diminishing the lumen of the appendix. In consequence of such swelling of the appendical wall, a narrowing is produced at each transverse flexure of the appendix. The stenosis obtains a secondary significance, analogous to that of the fecal matter. The author seldom found pathogenic bacteria in great numbers in the colon. The processus vermiformis may be regarded as predisposed to infection. The bacteria easily find in it an appropriate medium for their development, and for the exercise of their pathogenic functions.

As the various pathogenic bacteria differ as to their effects, the appendicitis will present itself under different forms. It is evident that tuberculosis and actinomycosis of the appendix, not infrequently observed, differ entirely from ordinary appendicitis.

The pathogenic bacterium most frequently found in the colon is the most common cause of appendicitis. This is the bacterium coli cummune (Escherich). This bacteria may be pathogenic for man and become virulent to a high degree; it is pathogenic for guinea-pigs and other animals used for experimental purposes.

The bacterium coli commune was present in pure culture in the contents of the processus vermiformis, in a chronic catarrhal appendicitis, which was in the intermediate stage of calm, in an exacerbation of a chronic catarrhal appendicitis, and in an acute gangrenous appendicitis. It was observed, always in pure culture, in the peritoneal exudation after a perforating appendicitis, and in the pus from an intraperitoneal pelvic abscess after perforating appendicitis.

The bacteria of the colon from a chronic catarrhal appendicitis, that was, for the time being, in a state of calm, appeared to be less virulent than the bacteria from a developing or an

acute appendicitis, although they were very highly virulent for guinea-pigs, which is analogous to that which has been found true in regard to the bacterium coli in normal feces on the one hand, and the alvine discharges of diarrhea and enteritis on the other.

This, to the author, seems to prove, with the highest probability, that it has had an important rôle to act, and has not been present as a passive element.

According to the author, it may be presumed, almost to a certainty, that bacteria are the principal distributing factors in the acute stage of appendicitis, the fecal matter of the dilatation through retarded secretions being only subordinate factors. In all probability the primary changes in appendicitis (catarrh and the thickening of the wall) are induced by the bacteria.

American Pediatric Society: Reasons for Adopting a New Nomenclature of Diseases of the Gastro-Enteric Tract in Children. (*Archives of Pediatrics.*)

1. There are many gastro-enteric diseases which with our present knowledge it is impossible to classify, but a new and better classification is necessary to simplify further investigation, and justifiable from the immense advance which has been made in our knowledge of this class of diseases.

2. A practical nomenclature should be made from where the stress of the lesions exists, rather than from all the lesions which are included in the pathological diagnosis.

3. This classification has reference to infants and young children, as distinguished from older children and adults, whose pathology and symptoms often differ materially from those belonging to early in life.

4. Infants and young children succumb to the early stages of disease sometimes before the later lesions and resulting symptoms have time to develop.

5. As the only symptom which shows the stomach to be involved, whether from reflex, functional, or organic conditions, is vomiting, the most simple way of approaching the subject is to classify diseases of the stomach alone and those of the intestine alone, but in the latter case to state in which of the diseases the stomach may be involved.

6. By the term *reflex* we mean an irritation peripheral, with a resulting action. By *functional*, a disturbance of the function of the organ without a known lesion. By *organic*, a known lesion.

7. Special organic lesions of the stomach are very rare, and are still rare even in connection with organic lesions of the intestine.

8. Vomiting as a symptom is often very misleading for diagnosis, and should not be considered as indicative of any one disease.

9. The pathological anatomy of the gastro-enteric tract of infancy and early childhood is essentially that of the ileum and colon.

10. Grave lesions at the autopsy may be found where the internal symptoms during life were very mild.

11. Serious symptoms during life are often represented at the autopsy by no pathological lesion.

12. It is probable that a large number of diarrheal cases have for their primary cause some form of bacteria, also that the variety of bacteria is great, but that it is their products which are the essential cause of the toxic symptoms.

13. Intestinal discharges are often very misleading for diagnosis.

14. Marked diarrhea may exist during life and no lesions be present at the autopsy.

15. Serious lesions may exist and yet no blood appear in the dejections.

16. Blood may appear in the dejections and yet presumably no serious lesions exist, the hemorrhage being only temporary and comparable to epistaxis.

17. The temperature is very important for classification. An elevated temperature of short duration points toward functional and toxic disturbance. An elevated temperature long and continued points toward inflammatory lesions.

18. In those cases in which deeply marked lesions are present the stress of the lesions is usually upon the lower ileum and the colon, and very frequently only in the colon; therefore, the terms ileo-colitis and colitis seem more descriptive than enteritis or entero-colitis.

19. The membrane in ileo-colitis pseudo-membranosa is often extensive, but sloughing and perforation are exceedingly rare in young children.

20. Eliminative. Under this term may be grouped a class of cases as yet very imperfectly understood, and in which certain morbid products are eliminated from the blood through the gastro-enteric tract, *e. g.*, urea.

21. It is supposed that all ulcers of the gastro-enteric tract are not necessarily inflammatory.

22. We can draw no absolute line between non-inflammatory and inflammatory cases, since conditions which begin as the former may easily run into the latter, the classification being made according to the stress of the condition.

Snow: Gastric Neuroses in Childhood. (*Archives of Pediatrics; Am. Med. and Surg. Bul.*)

The case which forms the basis of this paper is a child, eight years old. The ancestry and antecedents were distinctly neurotic. At nineteen months the attacks began, while in apparently perfect health and regular functions, with a convulsion. After this had passed, vomiting of an acrid watery fluid began. Retraction of the abdomen; no especial pain except the gastric irritability. Temperature 100–105°. At the end of five days the attack terminated spontaneously. The attacks recurred at intervals of six to twenty-five weeks, until seen by the author, each attack lasting usually five days—the longest sixteen days. After the fifth year the convulsive seizures ceased to be an accompaniment. The vomited fluid was intensely acid, and the acidity proved to be due to an excess of hydrocholoric acid. During the next attack, alkaline treatment having failed, a cerebral origin was suspected, and large doses of chloral and bromide given by the rectum, after which the vomiting ceased, and she slept twenty-nine hours, with an hour's intermission, and woke with normal digestion and appetite. She was then removed from school, given daily baths and gymnastics, and iron, arsenic, and strychnine as a tonic, with no recurrence for several months.

In the discussion of the paper by the American Pediatric Association, Dr. Holt related a similar case, with recurrent attacks of persistent and uncontrollable vomiting, the child lying

in a semi-stupid state, with retracted abdomen and occasional irregularity of pulse and breathing. Careful examination showed the excretion of uric acid to be much decreased during the attacks and much increased thereafter, the symptoms thus seeming to be associated with the elimination of uric acid. The prohibition of sugar and the restriction of starches in the dietary, milk, meat, bread, and fruits being allowed, was followed by a striking improvement. Dr. Christopher had seen a similar case, with the same uric acid proportions, in an adult, but secured good results by restricting meat and allowing sugar, starches, and fruit.

Dr. Rotch had written eight years before upon the subject. The cases were usually thought at first to be suffering from tubercular meningitis. The attacks, as a rule, are self-limiting. He advises starvation for twenty-four to thirty-six hours, and quieting the nerve centers by rectal medication.

HUCHARD: FALSE GASTRIC CARCINOMA; REFERRING TO FOUR CASES OF DIAGNOSED CARCINOMA. (*Internat. Klin. Rundsch.*, No. 14, 1894.)

He says in the first two cases no tumor of stomach is felt, though in one of the two (a sixty-three-year-old man) there is felt in the region of the umbilicus a hard tumor of the size of a billiard ball, and recently a small lymphatic gland has also been discovered. Since November, 1893, he has complained of his stomach, loss of appetite, aversion to meats, repeated vomiting of a blackish substance, noticeable emaciation and the almost pathognomonic straw-yellow color of the skin.

The second case shows an absence of this peculiar color in the face; he is fifty-three years old; shows only slight emaciation; no anorexia; no enlarged glands; no tumor; but since last September has had twice abundant hematemesis, vomiting coffee-ground material.

All four cases show entire absence of HCl in the stomach contents. Two cases are women, sixty and sixty-four. One began to emaciate with the beginning of vomiting, though the vomit was never like coffee-grounds. She had alternating diarrhea and constipation; a tumor is present in the pyloric region, of irregular, nodular shape, hard, and slightly painful.

The other case has had anorexia for ten months, never hematemesis, but vomiting since January, 1893, whenever she ate meat. In the region of the greater curvature is a noticeable tumor, hard, irregular, nodular, and painful on palpation. She is slightly emaciated.

He reviews the clinical symptoms of cancer, which may vary greatly. In many cases anorexia is entirely absent, others never present a tumor until very late, possibly on account of its location (cardia, lesser curvature; or posterior surface), or on account of its anatomical structure (diffuse, flat tumors). There may be tumors and never hematemesis, seldom even vomiting, or the cachetic face may even be wanting. In one per cent. of cases cancer of stomach occurs under thirty years. It does not always last twenty to thirty-six months; in the young the course is very rapid; on the other hand, Beaumetz reports a case lasting five years. In all slow cases we must remember that an ulcer has developed on the floor of the cancer. The course is not always progressive. Often remissions of longer or shorter duration occur, and with them often a seeming improvement.

Heredity seldom plays a part. The diagnosis of cancer is not always easy, even when there is entire absence of acid, as this disappears in many other diseases. A less diagnostic sign is the diminution of uric acid or phosphates in the urine, or an existing leucocytosis, which latter would make a differential point.

Nevertheless gastric carcinoma is often recognized. On the other hand many cases are diagnosed cancer, and cancer never exists. He cites the diagnosis made in case of Milne Edwards (a severe dyspepsia of cancer), and of Claude Bernard (uremic attacks), both mistaken for carcinoma.

The name "false cancer of the stomach" is not based upon exact logic, as there can be nothing false in a pathologic sense, but on her false tabes, false angina, etc. So why not false cancer? So we understand by *false cancer* a disease which, either on account of the predominant symptoms or the occurrence of several characteristic symptoms, causes it to be mistaken for gastric cancer.

HEUSTON, F. T.: ENTERO-VESICAL FISTULA TREATED BY LAPARO-ENTERECTOMY. (*British Medical Journal*, No. 1730.)

The patient, a medical gentleman, aged thirty-six years, was

first seen in March, 1891, his ill-health dating back one year. The previous December he was first troubled by frequent and painful micturition and tenesmus.

During January was confined to his bed, when stools were liquid; fecal matter was noted in urine. Under chloroform a full examination of his rectum was made, but no tumor or communication with the bladder could be discovered. Milk injected through a Thompson's sound did not pass into the bowel. A large enema containing a small quantity of sodium salicylate was administered, the patient requested to micturate, and the urine tested with perchloride of iron, and a relatively large quantity of the sodium salicylate was found. As no communication could be demonstrated from the bladder, the case was diagnosed as a simple ulcerative communication between the superior fundus of the bladder and the large intestine in the region of the sigmoid flexure, and that this communication was valvular in its action, allowing material to pass from the bowel into the bladder only. The case progressing unfavorably, an operation was proposed and consented to, provided a colotomy was not performed. Adhesions were found between the bladder and sigmoid, which were easily broken down. The opening in the bladder was easily closed, but there was present so large a mass around the opening into the sigmoid, a resection and end-to-end anastomosis was done, the Czerny-Lembert suture being used. Patient rallied, but died with all the symptoms of collapse on the fourth day. *Post-mortem* examination showed no evidence of peritonitis, both the bowel and bladder being firmly united.

Collins, W. J.: Anorexia Nervosa. (*London Lancet*, 3674–202.)

The author reports a case which illustrates the condition described by Gull, under the above title. A girl seven and a half years old, of healthy parentage, had for ten weeks before admission to the hospital persistently refused food, and had only partaken of very small quantities after much coaxing. On admission her skin was dirty, and she was infected with pediculi; the emaciation was extreme. Her legs and thighs were rigidly flexed, and any manipulation evoked tenderness and tears. The joints were unaffected, reflexes normal; weight 33 pounds; cir-

cumference of chest 20¾ inches; abdomen 18½ inches; upper arm 4 inches; around legs 5¾ inches. All the organs and excretions were normal, but some defined swelling and tenderness were noticeable over the outer part of the left thigh. On close observation the child was found to be very deceitful and intensely selfish; she took no notice of the other children in the ward, was self-absorbed, very vain, and "told long stories of other people who had been ill just like her, and what terrible things had happened to them." She was effusively pious in conversation, though she used foul language to the nurses and was filthy in her habits. At first she refused food and was difficult to feed. Such is the picture of the perverted *ego*—a gloomy self-concentration which seemed to extract a morbid vanity from the compassion evoked by bodily misery, coupled with a spurious piety. The temperature was generally raised, and later an abscess was opened in the left thigh; the wound healed rapidly. Massage, with neatsfoot oil, a copious dietary, cod-liver oil, and some liquor pancreaticus constituted the physical treatment. She improved immediately, her weight increased, and she recovered the use of her limbs, her mental and moral state. In two months she weighed 44 pounds and "she played with the other children, seemed interested in every thing in the ward, was easily manageable; a very amusing, bright, and clever child, always smiling and anxious to be helpful." This is the youngest case on record.

Schultzer, Julius: Intestinal Hemorrhage After Reposition of Incarcerated Hernia. (*Internat. Klinis. Rundsch*, No. 14, 1894.)

S. reports two cases, one a forty-seven-year-old woman, operated upon for strangulated hernia, the other a man of sixty-nine, with an incarcerated hernia reduced by taxis. The first case had three large bloody stools the night after the operation; fully one liter of blood was passed; patient discharged from the hospital cured on the twenty-fourth day. The strangulation had lasted six hours before operation.

In Case 2 the incarceration existed eight hours. There was no shock. Vomiting followed the reposition, and eleven hours after the reduction he had a stool composed of almost pure blood, about three fourths liter. The next day he had a stool of pure

blood about one half liter. The day following (February 12th) had a normal stool, as also on the 13th. Left the clinic on the 14th, five days after his admission.

S. attributes the hemorrhage to thrombosis of the vessels of the mucous membrane causing a necrosis of the mucous membrane or to an infarction at this point.

LAIRÉ: CHOLECYSTENTEROSTOMY; A NEW APPROXIMATION BUTTON. (*Therapeutic Gazette*, Vol. 10, No. 2.)

A case is reported in which cholecystotomy was done and a large gall-stone removed, the gall-bladder being stitched to the abdominal wall. Four or five weeks later a cholecystenterostomy was done, a small Murphy button being used for that purpose.

After a review of the subject of intestinal anastomosis the author states that the objections made by Senn and others to the Murphy button in gastro-enterostomy and lateral anastomosis, as allowing of too small an opening in such operations, led him to devise a new button. This operates on the principle of the Murphy button, but can be made of any desired shape or size. The approximating power is furnished by rubber bands. These long oval plates would leave an opening three inches in length. Rubber bands will remain in contact with the gastric juices for several days without undergoing any material change, and will retain their elasticity. They may be made from ivory, walrus tusks, horn, bone, and hard rubber. If, instead of being hollow and sharp, the edges of the button be cut flat, and the bone partly decalcified, they can be used on the principle of the Senn plates, as splints, without requiring sutures to keep the serous coats in contact.

SMITH, R. K.: CASE OF PENETRATING KNIFE-WOUND OF ABDOMEN; DESCENDING COLON WOUNDED, PROTRUDED, AND STRANGULATED; RECOVERY. (*Virginia Med. Monthly*, No. 239.)

Such a case is reported; a negro, male, aged twenty-five years; the wound extending from a point midway between the crest of the ilium and lower rib upward and inward, a distance of about four inches. Through this wound was protruding a knuckle of the descending colon, about four or five inches in length. A transverse wound of the colon, about an inch in length, was

found. This was closed .by a double row of interrupted Lembert sutures, and at this time it was noticed that the gut was becoming strangulated, the constriction being at the peritoneal opening.

Gut returned to cavity, which was irrigated with distilled water at 105° F.; the peritoneum was closed by a continuous suture of catgut, and the abdominal wall by interrupted buried catgut sutures.

No anesthetic was administered until the enlargement of the constricting opening was attempted, when he was given chloroform. Patient made an uninterrupted recovery.

Wyman: Perforation of the Appendix by a White Bean. (*New York Medical Journal*, March 10, 1894.)

The patient gave symptoms of appendicitis and was under observation for four days, having complained for twenty-four hours previously before operation. A large cavity was found, filled with foul-smelling pus; appendix was found and ligated off close to the cecum. There was one perforation present, and the appendix contained a white bean.

Instead of making the usual incision through the muscle, the author cut through the skin, fat, and fascia two inches long. Then in turn the fibers of the external and internal oblique and transversalis muscles were *separated* until the peritoneum was exposed. The advantages claimed for this method are, that there is less risk of infection through the wound and less danger of subsequent ventral hernia. In fifteen cases treated, each has recovered and has a perfectly cicatrized and sound abdominal wall.

Herman, W. B., Memphis: Gastrostomy for the Relief of Malignant Disease of the Esophagus. (*Memphis Medical Monthly.*)

The patient, a male, was forty-eight years of age. One year before seen he began to have pain of a dull character at the end of the sternum. Dysphagia steadily increased, and occasional hemorrhage occurred. An impermeable stricture was found upon examination, located about thirteen inches from the incisor teeth. Several months later a gastrostomy was done, an incision made two and a half inches long immediately below and parallel with

the left costal arch down and through the peritoneum. The stomach was secured, drawn up into the wound, where the anterior wall was transfixed by two long steel pins to hold it in position until permanently secured by sutures. The edges of the peritoneum were secured with artery forceps and drawn well up, while the peritoneal covering of the stomach was securely sutured to the peritoneum, fascia, and skin by one row of interrupted silk sutures placed about one fourth of an inch apart. The pins withdrawn, the wound was packed with iodoform gauze and antiseptic dressing applied. On the fourth day the dressing was removed, and under cocaine anesthesia an incision one quarter of an inch long was made into the stomach. A silver tube three eighths of an inch in diameter was introduced and left *in situ* for six days, when the opening was enlarged by stretching with a pair of clamp forceps, and the small tube replaced by another with a lumen of one half inch, and by this procedure leakage has amounted to a minimum. The patient has done remarkably well; is gaining in flesh and strength.

CARSTENS, J. HENRY: COLIC OF THE APPENDIX. (*New York Medical Journal.*)

Often obscure cases of colic are due to something getting into the appendix which can not easily get out, and hence causes spasmodic contraction until it is expelled. The author states that this is due to an abnormal formation, that is, the opening from the intestine is comparatively small, while the appendix itself is large and baggy. Hence if any fecal matter or seeds get into it, they are not easily got out, but are generally expelled by a contraction of the appendix. This of course causes pain.

In those cases where the opening is large, or larger than the body of the appendix, where it is, we might say, funnel-shaped, if any thing should get into it, it easily gets out; but where the opening is very small, if any little seed gets in there and can not readily get out, it naturally will swell, and then certainly can not easily be expelled. This starts irritation and inflammation of the mucous membrane, which extends, and all the dire results of perforation ensue.

Only a few cases of inflammation are caused by seeds. The great majority are due to fecal matter which can not get out, and

containing the *bacterium coli commune* and other noxious germs start up an inflammation of the mucous membrane. The resulting swelling of the mucous membrane still more decreases the size of the opening. Hence greater difficulty to expel the contents of the appendix, more irritation, inflammation, extension to the muscular and peritoneal coats, perforation, pus, sepsis, and death, which can only be stayed by a surgeon's hand.

PREZWOSKI, EDWARD: TUBERCULOSIS OF THE STOMACH. (*Brodowski's Testschrift; Annual of Universal Med. Sc.*)

The author observed five cases of this affection, finding the tuberculous ulcers to be usually located in the pyloric region, though sometimes met with in other parts of the mucous membrane. Generally there was but one ulcer; rarely several ulcers were united into one large ulcerating surface. In all five cases there was at the same time a tubercular affection of the lungs, of slow progress; and the author believed the gastric affection to be due to tubercle bacilli from swallowed sputum, the predisposing causes in the stomach being (1) chronic catarrh, with diminished acidity of the gastric juice; (2) the abundance of lymphatic nodules in the mucous membrane, especially in the cardiac and pyloric regions; (3) the length of time which the gastric contents containing the tubercle bacilli remain in the stomach; (4) accidental injury or rupture of the mucous membrane. Gastric ulcers differ from intestinal ulcers in that the submucous tissue plays the principal rôle, the muscular and serous tissues rarely being involved, while there are comparatively few bacilli. Tubercular ulcers of the stomach have little clinical significance unless followed by hemorrhage or perforation, which is rare.

LAHNSEN: A RARELY NOTED SYMPTOM IN NERVOUS AFFECTIONS OF THE INTESTINES. (*Muench. Med. Wehnschr; Am. Med. Surg. Bul.*)

After describing the usual symptoms in so-called nervous dyspepsia, the author calls attention to a peculiar pain on pressure of the celiac plexus, which is commonly overlooked. This plexus lies upon the anterior wall of the aorta, immediately below and in front of the aortic opening of the diaphragm on the left side. The continuation of this plexus is the superior

mesenteric plexus which supplies the whole of the small and large intestines, with the exception of the rectum and descending colon. If we press downward from this situation, after previously emptying the abdomen, if necessary, the patient will invariably complain of pain. This pain, on pressure of the nerves on the left side, is a very characteristic symptom.

His method of treatment is as follows: He allows the patient a general mixed diet, forbidding only carbonic acid drinks and food causing flatulence. At night the whole abdomen is surrounded by moist towels, followed in the morning by cold rubbings, then a glass of a natural spring water, a walk and a light breakfast consisting of coffee, bread and butter. Later, electric or steam baths followed by massage of the abdomen. After dinner, consisting of a mixed diet with a glass of wine, rest for one and one half hours, followed by electric sitz baths and gymnastics with an especial regard to abdominal movements. Supper at 7 o'clock, at which one or two glasses of beer can be allowed. Patient to go to bed at 9:30.

GRAHAM, JAMES: APPENDICITIS. (*Therapeutic Gazette.*)

In speaking of the medical treatment of appendicitis and its limitations, the writer dwells upon the importance of confinement in bed, and as far as possible in one position. The diet should be limited to liquids, and the patient carefully watched. If there is a history of the recent ingestion of indigestible food or prolonged constipation, or, on palpation, impacted feces are discovered, small doses of a concentrated solution of a saline cathartic should be given every half-hour or hour, to be followed in a few hours by an enema, given in the knee-chest position, of two ounces of salts in a quart of warm water. If nausea or vomiting occurs, small, frequently repeated doses of calomel, combined with bicarbonate of sodium, may be substituted for the salts. An excellent way to administer these drugs is to give five grains of calomel, fifteen grain of bicarbonate of sodium, with five of sugar, stirred in a goblet of milk, and a teaspoonful given every half-hour. After the bowels have been freely moved, if the pain is slight, and it usually will be, and the patient will remain at rest, continue the small doses of salines at longer intervals; but, if the pain is severe and the patient is

restless, give a hypodermic injection of morphine and atropine in sufficient doses to stop the pain and quiet the patient, and continue either the saline cathartic or the opium treatment, according to the indications.

Locally, if seen early, from two to twelve leeches will be of service, and should be followed by the ice-bag or coil, unless disagreeable to the patient, when hot fomentations can be substituted. Vomiting may be treated by ice and iced carbonated waters internally, and mustard sinapisms externally. Prostration should be met by stimulants and tonics. The writer states that the great bulk of recognized cases of appendicitis may be cured by this treatment, as the disease becomes limited by an adhesive, localized peritonitis, and a cure results. If, however, gangrene or a slough arises, or if, from the pressure of a foreign body or fecal concretion, perforative ulceration occurs, permitting the escape of the contents of the bowel, a surgeon should be called immediately.

Stowell, Wm. L.: Unusual Arrest of the Development of the Intestine. (*Gaillard's Medical Journal.*)

Mr. Stowell reported the case of a new-born infant suffering from intestinal obstruction and vomiting. A teaspoonful of castor oil was given without effect. The child nursed well and did not vomit the mother's milk until the fifth day. The child was constantly bearing down and straining. It had an emaciated body, abdomen sensitive to pressure. An injection of warm water and glycerine brought away a little blood, but nothing else. The vomiting continued and the abdominal distension increased to the ninth day, when the child died. An autopsy revealed the body in a healthy condition, except the intestines, which were imperfect. The stomach was normal; the duodenum was dilated to one inch and a third in diameter, except a constriction one inch from the pylorus. Eight inches below this the intestine ended in a blind pouch. The ileum was a little cord-like coil about the size of a walnut, not open at either end. The large intestine was half the size of a lead pencil in diameter, thoroughly collapsed, and more or less occluded. The arrest of development must have taken place when the fetus was about three months along, because at that time the cecum is next to the first part of the duodenum,

where he found it in this case. He mentioned several similar cases reported by Dr. Craig, of Edinburgh, and others. Nothing in the way of surgery could be done in this case. An interesting feature was that the child lived for nine days, although the greater length of the intestine was entirely without any functions. The stomach and duodenum seemed to be able to digest for three or four days, until it became overloaded with the residue of milk, and then the fecal vomiting took place.

WHERRY, GEO., CAMBRIDGE: VALUE OF COUGHING-TAXIS IN THE REDUCTION OF HERNIA. (*Gaillard's Medical Journal*, March, 1894.)

The cough which so often produces a hernial protrusion may be used with the greatest advantage during reduction. The abdominal parts concerned are in the most favorable position for the reduction of hernia while the patient is coughing; the taxis should then be applied by careful fingers after the following method: On beginning the attempt at reduction the surgeon places himself and his patient in the most comfortable and favorable position for gentle, continuous manipulations. The patient should be recumbent, with the buttocks rather raised and the thigh flexed on the abdomen, while the surgeon would usually prefer to sit by the bedside. During the whole of the time that taxis is used the patient must cough, only stopping for rest or retching; the operator's efforts should be continuous, even during these pauses, and his gentle but firmly applied pressure will be aided by every cough of the patient; also during the retching I have thought some advantage has been gained. In this method the sensation to the surgeon is that the hernia is reduced rather by the coughing of the patient than by the working of the fingers of the manipulator. I have, during several years past, so often succeeded in reducing herniæ of all varieties that I can strongly advise this plan, feeling sure that it only requires to be known and practiced to be appreciated. The last case which occurred to me I was called to see at the hospital at two o'clock in the morning, "very cross and dogged," as the spiritual diarist records. I found a middle-aged woman with a femoral hernia with urgent signs of strangulation. She had been under the care of two medical men who had, with taxis, used chloroform.

The patient coughed during ten or fifteen minutes while my quite gentle but continuous taxis was used; the hernia was first gradually reduced in bulk, and the last little button returned with a jump into the abdominal cavity. A good recovery followed.

The finger placed in the healthy abdominal ring, while coughing is practiced by the person under examination, will enable the operator to realize that the alternating contractions and relaxations of the boundaries of the ring are most favorable for the return of the hernia, if pressure be skillfully practiced. In commending this plan I have only my own experience to go upon, but it is now sufficiently large to enable me to express myself with confidence in its favor. Coughing-taxis, as well as tussio-taxis, would be a name as good as any other hyphened hybrid for this maneuver, which I hope may prove as useful in other hands as it has done in mine.

MURPHY, F. E.: CASE OF AMEBIC DYSENTERY. (*Journal American Medical Association.*)

Man, tailor, aged thirty, a native of Russia, in the United States ten years. Family and previous history excellent. First came under observation in October, 1893. Gave history of a diarrhea which began June 1st previous. Stools frequent and tinged with blood; improved under treatment, but frequent relapses occurred.

At time of examination he showed anemia and emaciation; stools were watery, brownish in color, contained much mucus, and were alkaline in reaction.

Microscopic examination showed blood corpuscles, pus cells, epithelium, crystals of triple phosphates, and amebæ in active motion.

The amebæ were five to eight times the diameter of a red blood corpuscle, and in the active ameba a division into ectosarc and endosarc could be clearly made out.

The granular interior contained micro-organisms, and some contained red corpuscles. Larger and smaller vacuoles were present in the body of the amebæ, and a change in size of larger vacuoles was detected. The movements were of progression and thrusting out of blunt pseudopodia.

Among the amebæ in motion were found bodies a little larger

than white corpuscles. They were motionless, granular, contained a nucleus, and were highly refractive.

The case was treated by rest and dietetics, high rectal injections of dilute solutions of quinine; salol and Dover's powder internally.

STEPP: TREATMENT OF CHRONIC ULCER OF THE STOMACH. (*Therap. Monatschefte; Therapeutic Gazette.*)

During the past four years the author has used chloroform-water with bismuth subnitrate. The latter he does not consider necessary. He gave only the following formula:

Chloroform	1 part;
Aqua	150 parts;
Bismuth subnitrate	3 parts.

Sig. One to two spoonfuls hourly.

Dr. Stepp remarks that chloroform taken internally as aquæ chloroformi is never an anodyne and has not the slightest pain-alleviating property. He gives the history of seven cases chosen from a very large number. As soon as the diagnosis is confirmed the chloroform treatment can be begun; the refreshing taste of the chloroform-water combats most actively the nausea and thirst after the bleeding, and any tendency to further bleeding is stopped by the styptic properties of the chloroform. In new as well as long-standing ulcers there is soon a marked improvement; the color of the face improves vastly.

All the patients said that each time, after taking any, they felt a burning in a certain part of the stomach, doubtless the place of the ulcer, which disappeared after eight to ten days. He never found any harmful influence upon the rest of the body.

GERSUNG: A NEW RADICAL OPERATION FOR UMBILICAL HERNIA. (*Wien. Med. Presse; Pacific Medical Journal*, March, 1894.)

The operation differs in no essential particular from methods hitherto practiced, save in the treatment of the external opening. The sheath of both recti are divided, the median margin of both muscles are divided in an upward direction to a point above the level of the umbilicus. The separation of the recti from the umbilicus on each side amounts to as much as a hand's breadth,

and to permit of union in the median line the muscles must first be rendered sufficiently movable by dissecting off the two *inscriptiones tendinea* lying in close proximity to each other from the sheath. After the muscles have been drawn without marked tension to the median line their margins are united, the sutures being carried through the *inscriptiones tendinea* to secure greater firmness than by exclusive suture of muscular tissue. As large wounds of fatty tissue are not prone to heal by first intention, Gersung does not tie the external sutures firmly until the end of a few days, the wound in the mean time being packed with gauze, over which the sutures are tied in a bow-knot.

SWAIN, JAMES: APPENDICITIS. *Bristol Medico-Chirurgical Journal.*)

As regards the treatment of appendicitis, the author would treat the simple and plastic form on the expectant plan; but would perform abdominal section in: (1) Suppurative cases; (2) in cases where there is ground for suspecting deep suppuration; (3) in the relapsing form; (4) in rapidly perforative cases.

As regards incision, he advises an oblique one placed at right angles to an imaginary line drawn from the right anterior superior iliac spine to the umbilicus; should be two to four inches long, placed about two or three inches internal to the iliac spine, and its center corresponding to the imaginary line referred to. In suppurative cases the incision should be placed over the seat of the suppuration, to avoid opening and perhaps infecting the general peritoneal cavity.

His pathological classifications are: (1) Simple appendicitis, affecting only the walls of the appendix—not extending to the peritoneum; (2) plastic appendicitis, associated pathologically with a fibrinous inflammation of the neighboring peritoneum; (3) suppurative appendicitis; (4) rapidly perforative or fulminating appendicitis; (5) relapsing appendicitis.

WORCESTER, A.: TREATMENT OF APPENDICITIS. (*Boston Medical and Surgical Journal; American Lancet.*)

Appendicitis itself is not a serious disease, for it is the inflammation of a worthless part of the body. It is, however, apt to recur. And any attack if left to nature or to medical manage-

ment may cause a fatal purulent peritonitis or a localized abscess.

Appendicitis can be as readily recognized as can any other local internal inflammation. This diagnosis, however, is easiest in the earliest stage of the disease.

No rules can be formulated for differentiating the varieties of appendicitis, and thus foretelling which cases will recover and which will cause dangerous or even fatal consequences. For there is no known way, except by abdominal section, of ascertaining the rate of progress or the extent of the inflammation in any given case; nor of determining the virulence of the contents of the organ, or its anatomical situation.

The only rational treatment of the disease is its immediate ending, by excising the organ, before its own death or damage causes like results to its owner. This, at the beginning of the attack, is a feasible and absolutely safe operation.

The mortality in properly treated cases of appendicitis is *nil.*

FRIEDENWALD, JULIUS: ATONY OF THE INTESTINES. (*The Medical News.*)

The symptom of which patients suffering with intestinal atony complain is marked constipation. This is frequently the only symptom. At times it does not produce much annoyance. Cases have been recorded in which fecal evacuations have occurred at intervals of eight, twelve or more days without causing any inconvenience. However, the constipation usually becomes very annoying and produces great discomfort. The abdomen frequently becomes distended, giving rise to a feeling of fulness, while the formation of gas causes colicky pains and a desire to discharge flatus. Other symptoms present are headache of a dull character, which may lead to vertigo, loss of appetite, nausea and pressure after eating, pains in the back and loins.

On examination the abdomen is found distended with gas, so that a marked tympanitic sound is elicited on percussion. If the abdominal walls are thin, the configuration of the distended colon may be made out with ease. Usually the abdomen is equally distended, but in cases of partial atony of the intestine the distention is asymmetrical. The fecal masses which frequently may be felt in the region of the sigmoid flexure are usually drier,

darker, and harder than normal. Of great importance in the determination of atony of the intestine, as well as of the position of the colon, is a method recently devised by Boas.

After the bowels have been moved warm water is introduced into the colon through a Hegar funnel. Under normal conditions a splashing sound will not be produced before the bowels contain from 500 to 600 cubic centimeters of water. This splashing sound is induced by quick movements of the fingers upon the abdomen within an area bounded by a line a hand's breadth above the umbilicus, and another passing through the umbilicus.

Under pathologic conditions the succussion sound and the splashing sound can be generated with but small quantities of water (200 to 300 cc.), and may reach much lower, at times to the symphisis pubis. This method not only shows the position of the large intestine, but also indicates an atonic condition of the colon.

The whole colon is not always equally atonic. We frequently find atony of only the descending colon and of the rectum. This also results in fecal accumulations and marked constipation.

In the treatment such foods are ordered as stimulate intestinal peristalsis, as fruits, vegetables, salads, German and rye breads.

Abdominal massage is of great value, electricity, also, by the external application of a moderately strong faradic current.

Injections of large quantities of oil, as recommended by Fleiner, rarely prove ineffectual in cases of this form of chronic constipation.

Lund, F. B., Boston: Cancer of the Sigmoid Flexure, Perforation of the Cancerous Ulcer; Death; Autopsy. (*Boston Medical and Surgical Journal.*)

The patient, a laborer fifty-two years old. In August, 1893, he complained of pain in the abdomen and back, constipation, flatulence, and occasional diarrhea; at times a little blood in his stools. He had pains in the region of the bladder and painful micturition three years before. At the time of examination he was of sanguine complexion, and showed no marked cachexia, although he said he had lost much flesh. His stools were not abnormal in shape and there was a little bright blood passed with them. At this examination a diagnosis of proctitis, chronic,

was made. On abdominal examination marked tenderness was found in the left iliac region, and a tumor which was very hard, irregular in shape, of insignificant size, and apparently fixed to the pelvic brim. After free catharsis the tumor in part disappeared, but a tender mass, distinct enough to be felt, was left. A probable diagnosis of malignant disease of the sigmoid flexure was made, but he would not submit to an operation. On December 26th, after carrying a hod of coal up two flights of stairs, he complained of severe abdominal pain, lay down, vomited for fifteen minutes, and died within half an hour.

Autopsy the following day revealed a large quantity of liquid feces in the abdomen, which escaped no doubt through a large opening admitting two thumbs in the sigmoid flexure. This opening was surrounded by a ring of hard, nodular tissue, continuous with a small nodular mass in the mesentery.

The pain in this case was very severe, as its close relation to the great nerve roots of the lumbar and sacral plexuses would render probable. A section of this growth shows nerve filaments grasped and probably constricted by the fibrous stroma of the growth.

PENNINGTON, J. R.: PILES; THEIR CLASSIFICATION AND TREATMENT. (*Chicago Medical Recorder.*)

There appears to be but little appreciation of the varieties of piles, their reflex disturbances, the various methods of treatment and the results of an apathetic attitude toward patients afflicted with this malady. This lack of appreciation, perhaps, is due in part to the fact that there has been a want of opportunity for special instruction in diseases of the rectum. They are of importance: (1) Because the rectum is one of the most fertile of reflex troubles. (2) Because they are productive of a vast amount of local suffering. (3) Because of the great importance of the external sphincter, which, if incapacitated, is liable to be followed by incontinence of feces.

Piles may be divided into external, internal, and interno-external. External piles are of two kinds: (1) tags of skin; (2) varicosed veins, neither of which is troublesome when in a quiescent state. Any thing, however, which causes this tag to become inflamed, or the vein thrombosed, thus forming a thrombotic pile,

will bring on an attack of external piles. Internal piles are classified as venous and capillary.

In operation, after thorough stretching of the sphincter, after anesthetization, preceded by accepted antiseptic precautions, the pile is drawn down and away from its attachment and separated with scissors from the submucous and muscular tissues. The incision is made at the junction of the skin with the mucous membrane, and is carried up the bowel so that the pile is left connected by mucous membrane and vessels only. A strong ligature is then tied on the mucous side of the pedicle, as high up and tightly as possible, the assistant pulling the pile down and outward. The ligatured pile is then returned within the sphincter. To minimize the tendency to contraction, I conceived the idea of making the incision not along at the side of the pile at its base, but along the side and above the base. By this procedure the entire tumor, including a small portion only of the mucous surface, is radically removed. Care, however, must be taken not to leave a surperfluous amount. We thus provide for the readjustment of healthy mucous tissues and guard against contraction.

MANGES: LILIENTHAL: A STENOSING CARCINOMA OF THE TRANSVERSE COLON; EXCISION; MURPHY BUTTON ANASTOMOSIS. (*New York Medical Journal.*)

Patient, male, fifty-one years old. Had what was called typhoid fever fourteen months before seen by the reporter. For five months has had to resort to morphine for relief of pains, which were variable, appearing most frequently after meals and preceding or following stools. No hemorrhage from bowels, or hematemesis, vomiting though on slight provocation.

Examination showed a distinct, hard tumor, size of hen's egg, in left umbilical region, quite painful, and is transversely situated at the level of the umbilicus.

Under chloroform patient was operated upon by Dr. Lilienthal. Median cut two inches above and below the navel. Tumor found to be a cicatricial-looking mass in the transverse colon. The omentum was firmly adherent to the growth. A resection was done, some fecal matter escaping, owing to the clamps being ineffectual. The greater part of the great omentum was also removed. A large Murphy button an inch and three quarters

in diameter was used to approximate the ends of the gut, about six inches in all being removed.

The excision and approximation of the gut took not longer than six or seven minutes. With the exception of a rise in temperature to 103° on the second day the patient progressed well. On the eighteenth day massage over the colon, from right to left, was done, an enema given two hours later, and the button passed without pain. The growth proved to be a cylindrical-celled adeno-carcinoma, apparently a degenerated adenoma.

THOMPSON, JOHN: CASE OF MEMBRANOUS ENTERITIS IN A YOUNG CHILD. (*Archives of Pediatrics*, January, 1894.)

Female child, two and a half years old. Previous history negative as regards bowel troubles. Heart, lungs, and abdomen normal, and tongue nearly clean. The first attack began with a variable appetite, picking at the nose, grinding the teeth, and the finding of portions of false membrane in the stools which at first were considered to be worms.

The second attack occurred four months later, symptoms as above noted not being present until after the membrane was noticed as present. Some tenesmus was present. At first the membrane was passed every four days, but after treatment was instituted, every ten days or a fortnight. The membrane often was passed as an entire tube sheathing the feces. Under the microscope "it was found to be composed of a glassy-looking matrix in which were imbedded at pretty regular intervals numerous fatty-degenerated epithelial cells and leucocytes, and which contained innumerable micro-organisms of various forms and sizes." It was composed mainly of fibrin. Nux vomica, bicarbonate of soda, and gentian were given, with a few doses of gray powder and rhubarb.

PATTERSON, STUART: ENTERIC DISORDERS OF CHILDHOOD. (*Medical Brief; Pittsburgh Medical Review.*)

In the summer diarrhea of children the author employs magnesium sulphate. In the cases mentioned by him the ages ranged from one to six years. The dose and mode of administration of the remedy were as follows: The mother was directed to give to a child a year old an even teaspoonful of sulphate of magnesium, sufficiently moistened to swallow, as soon as she arrived at home,

the process to be repeated in the morning, and the child to be brought back to me at three P. M. on that day, that being the hour of my service at the dispensary. This procedure was repeated daily at the same hours till the discharges became *yellow*. For the older children the dose ranged from a heaping teaspoonful to a heaping tablespoonful. The after-treatment consisted of general tonics and prophylactic precautions. The former were selected according to the necessities of each case. Those most frequently used were syrup of iodide of iron, cod-liver oil, compound syrup of hypophosphites, strichnine, quinine, pyrophosphate of iron, etc.

PRYN, W. W.: CASE OF FATAL GASTRO-INTESTINAL HEMORRHAGE IN AN INFANT. (*British Medical Journal*, 1893, i, 1160; *Archives of Pediatrics.*)

The child, a male, was born April 9th at 3 A. M., and every thing seemed normal until the next day at 5 P. M., when he vomited a considerable amount of clotted blood, and hematemesis continued at frequent intervals until midnight, when the vomiting ceased, but melena appeared. He died the next day about noon.

The *post-mortem* showed the portion of the small intestine, which corresponded roughly to the jejunum, purple in color. The stomach contained clotted blood, its mucous membrane was deeply congested, but there was no loss of substance. The small intestine contained small clots, its mucous membrane was intensely congested throughout, and there were hemorrhages into the wall of the jejunum. Abrasions of the mucous membrane were not found. The mucous membrane of the large intestine was in part healthy, in other parts discolored. The liver, heart, and lungs were healthy; and apparently the changes in the circulation had been proceeding naturally.

BRISSAUD: TREATMENT OF CANCER OF THE STOMACH. (*Allg. Medizin Central. Zig.; St. Louis Medical Era.*)

It has been known for a long time that solutions of chloride of sodium possess curative properties in epitheliomata of the mouth and certain cancroids of the nose. On the ground of these observations the author has employed this treatment in cases of cancer of the stomach. Owing to the limited solubility of the chloride of potassium and its comparative poisonous char-

acter, the sodium salt was selected, which is less toxic and can be injected without risk in quite large doses. The chloride of sodium dissolves in three parts of water, while the potassium requires twenty parts of water for solution. As regards the dosage, eight sixteenth-grams were given daily. As the result of this treatment the pains were relieved, and some of the gastric symptoms disappeared, sometimes so permanently that it seemed almost as if a cure had been effected.

FENWICK, SOLTAU: DIPHTHERIA OF THE STOMACH. PATH. SOC. LONDON, DEC. 19, 1883. (*London Medical Journal; American Medical and Surgical Bulletin.*)

The author showed a specimen of diphtheria of the stomach in a child of three years, who had been seized with dyspnea, notwithstanding that tracheotomy was performed. There was no membrane on the tonsils or pharynx, and, as observed after death, there was none in the esophagus. The interior of the stomach was lined throughout with a membrane which microscopically showed the ordinary histological characters of diphtheritic membranes. There was considerable increase in the lymphoid tissue of the mucous membrane itself. The condition had been observed but very rarely in young adults; more frequently in children. Speaking generally, the membrane occurred either in streaks or patches, which latter might cover the whole of the interior.

CANTRELL, J. K.: A CASE IN WHICH THE RECTUM EMPTIED IN THE BLADDER. (*St. Louis Courier of Medicine.*)

Child was delivered after a tedious labor, but nothing abnormal noted at this time. On the second day it was reported that the child had had no movement from the bowels. An examination showed a curb in the skin in the position of the anus, and an incision was made through the skin about one half inch long, but no opening found. After considerable probing it was noticed that there was a dribbling of dark urine with yellow lumps from the penis.

An incision was made into the bladder, about four to six ounces of urine and fecal matter pouring out. The gut emptied into the bladder through a small opening near the neck posteriorly. A drainage-tube was left in position, wound draining well. Child died on seventh day after operation.

POTAIN: GASTRIC ULCER, DIAGNOSIS AND TREATMENT OF. (*International Medical Magazine; American Medical and Surgical Bulletin.*)

A case, aged forty-five, was presented to his clinic; a hysterical woman, with gastric disorder of three years' standing. Hematemesis had been present; abdominal tenderness, but no tumor found. Cancer, venous stasis due to liver trouble, aneurism, leucocythemia, malaria, and Bright's disease eliminated as the cause of the hematemesis.

In the treatment of ulcer of the stomach drugs are rarely needed. Revulsion is the best therapeutic agent for the pain. The diet should be exclusively of milk. It is to be given in small amounts and continued for a long time. Gradually a vegetable diet may be substituted. Remedial agents should be resorted to in accordance with the symptoms.

ANDERSON, EDW.: OBSTRUCTION OF THE BOWELS. (*Journal of the American Medical Asosciation*, Vol. xxii, No. iv.)

The author points out that surgical aid should be procured in those cases in which complete obstruction occurs suddenly, accompanied by pain sufficiently intense to require the administration of large doses of opium oft repeated, enemas having failed, but that other means can be tried if the pain is not intense and hard substances, upon which the intestinal juices are unable to act, are found to have been swallowed.

If a large solid substance is known to have been swallowed, it is best to allow no purgatives to be given, and to keep the patient on solid food until it passes. In all cases of obstruction large enemata should first be employed.

ROSENBACH: GASTRIC AFFECTIONS TREATED BY SODIUM BICARBONATE. (*Med. Week.; Am. Med. and Surg. Bul.*)

The use of sodium bicarbonate in large doses in gastric disturbances is considered objectionable, if not even injurious, exerting only a palliative influence; and it is maintained that intestinal peristalsis is diminished thereby. The author is of opinion that sodium bicarbonate is indicated only in acute gastritis; and that it should be used very sparingly in chronic gastric affections, a few grains daily as a means of temporary relief.

Book Reviews.

An American Text-Book of Diseases of Children. By American Teachers. Edited by Louis Starr, M. D., Physician to the Children's Hospital and Consulting Pediatrist to the Maternity Hospital, Philadelphia; late Clinical Professor of Diseases of Children in the Hospital of the University of Pennsylvania; Member of the Association of American Physicians and of the American Pediatric Society, etc.; assisted by Thompson S. Westcott, M. D., Attending Physician to the Dispensary for Diseases of Children, Hospital of the University of Pennsylvania; Physician to Out-patient Department, Episcopal Hospital; Fellow of the College of Physicians, Philadelphia. Price, cloth, $7; sheep, $8; half Russia, $9. For sale by subscription only. Philadelphia: W. B. Saunders. 1894.

Few books upon any subject have been offered the profession at home or abroad so complete in all details as is this "American Text-Book of Diseases of Children." Its editor, Dr. Louis Starr, long identified as a pediatrist, has made most excellent choice of his collaborators—sixty-three in all, chosen from the States and Canada, but for some reason no author appears from any of the Southern States; whether because there are no pediatrists of note below Mason and Dixon's line we can not state.

The work is produced in the usual excellence of the house of W. B. Saunders, and consists of 1190 pages, well illustrated with frequent interleaves of half-tone cuts, which admirably illustrate the subject depicted.

Lack of sufficient space prevents our making the general notes which we think due so complete a work, but there are a few points which are worthy of special notice.

The introduction of sixty pages contains four most excellent articles—the first chapter by the editor upon "Feeding, Bathing, Clothing, Sleep" is up to this author's usual standard—concise, yet full of valuable details.

We are pleased to note that the normal temperature for infants is given as above the adult normal, but we do not agree with the author when he states that a stethoscope is unnecessary in the examination of the lungs of a child; we consider a stethoscope essential to the accurate diagnosis of many pathological conditions; for instance, a small patch of broncho-pneumonia high up

in the axilla—how can that be heard by the ear of the auscultator? We would emphatically insist that its use be not restricted to the examination of the heart.

We think that the time for the eruption of the first teeth is given a little early; in our experience it is the exception for them to appear as early as the fourth month, nor does this correspond with the five to seven months given in another section of the work as the time for the first teeth to appear.

The section upon feeding is admirable, and with the most excellent chapter by Prof. Albert Leeds are worth the price of the work themselves.

It is pleasing to note the conviction with which Dr. Chapin writes upon hereditary syphilis. Such sentences as this attract one's attention: "While it has been denied by some observers that the father alone can transmit syphilis, the consensus of opinion is in favor of the possibility of such transmission, *which can and does take place.*"

The chapter upon whoopingcough contains nothing new upon the treatment of this troublesome disease.

Tincture of the chloride of iron and jaborandi are strongly recommended in the treatment of erysipelas, while little importance is attached to local treatment.

The cuts illustrating rachitis are very inferior ones, and do not compare at all favorably with the ones elsewhere in the book.

The chapter on gastro-enteric disorders, while not so full in details as others which have appeared, is very good.

Recognizing the frequency of rectal affections in children, the author has devoted an excellent chapter to their consideration. Considerable space is given to congenital malformations of the intestines, rectum, and anus, which are in the main treated in the manner suggested by most authorities. The notice given to pruritus ani is inadequate, because when this affection does exist in the infant it is a most distressing one and difficult to combat. The author makes it sufficient that "when the itching can be traced to the presence of parasites, either animal or vegetable, the use of some of the anti-parasitic lotions or ointments appropriate for the individual case will rapidly affect a cure." No mention is made of what would be a good anti-parasitic, and the truth is that no such lotion or ointment would prove of much service in

such cases, for the reason that the parasites are located generally *within* the rectum, where such forms of medication could not reach. A proper *injection* would be of much greater service.

The author calls attention to the fact that fistula-in-ano is of rare occurrence in infants, but states that Allingham mentions the fact of its occurrence in the very young, and he (the author) records the case of the affection in a child a few months old. By referring to Mathews on the Diseases of the Rectum, Anus, and Sigmoid Flexure it will be seen that a case is recorded of a fistula-in-ano in an infant *two weeks* old. The author very properly recommends the division of the fistulous tracts by the knife, save in those cases where the internal opening is located so high as to be followed by excessive hemorrhage. In these he advises the use of the elastic ligature.

The existence of fissure of the anus in children is admitted to be of more frequent occurrence than is supposed, and it is recommended that an application of a twenty-grain solution of nitrate of silver be applied to the fissure or the solid stick applied. In cases which are found intractable division or stretching of the sphincter muscle is to be resorted to. We can not agree to either one of these suggestions. In the first place a fissure in an infant is of recent (acute) origin, and the application of a caustic is unnecessary. A much simpler method will effect a cure unaccompanied with pain, viz., have the mother annoint her finger each morning for several times and insert gently into the rectum of the child; after this is done a few times the abrasions (fissures) will disappear. If this does not suffice a small speculum introduced and slightly distended will in the majority of cases effect a cure. To the second proposition, *division* of the sphincter muscle, it must be remembered that in the infant this muscle is so feebly formed as to require no division under any circumstances.

Stricture of the anus is referred to as a congenital affection. It would appear that "atresia" would be a much better term to describe such an affection. Having no pathology, the condition can scarcely be called a stricture. The author deserves much credit for calling attention to the fact that infants may suffer from an acute or chronic proctitis. Such cases are so often mistaken for and treated as dysenteric that it is a pleasure to have such

impressions corrected in so great a work as this. He is to be congratulated, too, upon his positive instructions as to how to manage a rectal abscess. Such condition is regarded as serious by the author, and it is recommended to give an anesthetic, freely open, break up loculi, and drain the cavity. If such course were followed great damage would be averted.

In regard to syphilis of the rectum this announcement is made: "A case of gummatous infiltration of the coats of the rectum in a child ten years of age, at the same time exhibiting well marked symptoms of inherited syphilis, has been described by Ball and Osler."

This is in accord with the views of the advanced thinkers, and clearly refutes the old idea yet held by some that strictures of the rectum are generally produced by the extension of chancrous pus *into* the rectum and not by gummatous deposit.

The cuts in this special chapter are wholly inadequate for illustration, and are done in a crude way.

Diseases of the pharynx and naso-pharynx embraces acute naso-pharyngitis, chronic pharyngitis and folliculous pharyngitis, acute follicular tonsillitis, etc. The author describes two forms of acute folliculous tonsillitis, the infectious pseudo-membranous and the simple folliculous tonsillitis. The former is due to infection by any one of the several species of micro-organisms. The latter is conditioned if not caused by taking cold. It is without evidence of infection and is not contagious.

In speaking of the treatment of hypertrophy of the tonsils the author states that he has never been able to observe any permanent reduction of enlarged tonsils from drug administration, and that the only satisfactory treatment is abcision, a conclusion in which most laryngologists will agree. The author regards the danger from hemorrhage in tonsillotomy in children as almost *nil.*

Many of the dental surgeons will disagree with the author as to the relations between adenoids and the irregularities of the hard palate.

In the chapter upon the eye the author states that only those diseases are recorded which the general practitioner of medicine and surgery is likely to encounter, and which do not demand the use of instruments of precision for their detection or study.

Notwithstanding this method of elimination and limitation,

the author still has left on hand more than fifty different affections of the eye and its appendages, whose etiology, diagnosis, prognosis, and treatment he attempts to deal with in half the number of pages, making this part of the work little more than a glossary of ophthalmology.

Assuming that the average "general practitioner of medicine and surgery" is well grounded in the elementary principles of ophthalmology, that he has a practical knowledge of the anatomy and physiology of the eye, and that he has the time and courage to make a thorough and systematic examination, that each case that comes under his charge is uncomplicated, properly classified, and plainly labeled, that he only needs a prompter to give him the cue as to what is latest and best in the *care* and treatment of the affections, then the work would be a valuable contribution to his library, otherwise it will avail him nothing.

That part of the work which treats of diseases of the conjunctiva is more elaborate and is exceedingly well written, especially that part relating to the management of ophthalmia neonatorum.

The painfully condensed and abbreviated condition of the remaining subjects is of course not due to any fault of Dr. De Schweinitz, whose ability both as author and teacher is well recognized, but is the result of a system of handicapping the authors of the different articles, limiting them to a specified number of words or pages, a system that is unscientific, unfair to the author, unprofitable to the student, and in the end unsatisfactory to the patient.

Withal the book is a most excellent one, a valuable addition to the student's library, and an essential to that of the pediatrician.

International Clinics. A Quarterly of Clinical Lectures on Medicine, Neurology, Pediatrics, Surgery, Genito-Urinary Surgery, Gynecology, Obstetrics, Ophthalmology, Laryngology, Otology, and Dermatology. By Professors and Lecturers in the leading Medical Colleges of the United States, France, Great Britain, and Canada. Edited by JUDSON DALAND, M. D., Philadelphia; J. MITCHELL BRUCE, M. D., F. R. C. P., London, Eng.; DAVID W. FINLAY, M. D., F. R. C. P., Aberdeen, Scotland. Philadelphia: J. B. Lippincott Company. Fourth series, No. 2.

This can truly be said to be the "Clinical Age" in medicine. The busy physician will no longer be content to read long dissertations on any subject, but rather prefers something crisp and

to the point. Medical colleges, to be abreast of the times, must make *clinical* teaching their main drawing card, for students have begun to realize that it is by such instruction that the most knowledge is gained. *International Clinics* bring before the busy practitioner every thing that is new in medicine and surgery, and all the special departments. One would imagine in reading these valuable books that the teacher was at his side, and the subject-matter within reach for inspection. No one could fail to be interested when such names as the following are speaking through these lectures, viz., Babcock, Barclay, Baum, Byford, Carstens, Churton, Coe, Curtis, Dumesnil, Grawitz, Hamilton, Herrick, Hulke, Ingals, Lefferts, Longyear, Lydston, Mann, Milligan, Mills, Moore, Mundé, Oliver, Park, Pick, Pooley, Potain, Pritchard, Ralfe, Renard, Roberts, Robson, Sachs, Saundsby, Sayre, Shaw, Skene, Solis-Cohen, Starr, Straton, Taylor, Wharton, White, and Wolfe. These names represent some of the ablest clinical teachers in the world, and what they say is authority. Almost every medical and surgical subject is treated of in a clinical way in the *International Clinics*. To practitioners and students it should be a rare treat to read these lectures, and especially to the country doctor is the work invaluable. We are glad to welcome annually these books, and believe that the editors are doing the profession a great favor, for which money would be poor remuneration.

Summer Complaint and Infant Feeding. By W. S. Christopher, M. D., Professor of Diseases of Children, Chicago Polyclinic, etc. Chicago: Blakely & Rogers, Printers. 1892.

Though published in 1892, this little work is a valuable one, as but little advancement has been made upon these important subjects since. It is a neat little work of ninety-two pages, with five chapters; the first appeared in the *New York Medical Journal*, November 9, 1889; chapters two, three, and four in the *Journal of the American Medical Association*, and chapter five in the August number of the *Archives of Pediatrics*, of 1892; all arranged connectedly.

The classification given by the author is made according to the causes acting to produce diarrheas, as (1) nutritional disturbances, (2) poisons developed in the blood, (3) poisons developed

in the intestinal walls, and (4) poisons developed in the intestinal contents.

Chapter IV, on Principles of Infant Feeding, contains many practical points, as directions full and concise for imitating human milk, sterilization, necessity for fats, and the quantity and regularity of feeding, completed with excellent conclusions.

We are indebted to the Helvetia Milk Condensing Company, of Highland, Ill., manufacturers of the Highland Brand Evaporated Cream, for the work.

A Hand-book of Medical Microscopy for Students and General Practitioners, including chapters on Bacteriology, Neoplasms, and Urinary Examinations. By JAMES E. REEVES, M. D., Member of the Association of American Physicians, etc. With glossary and illustrations; price, $2.50. Philadelphia: P. Blakiston, Son & Co., 1012 Walnut Street. 1894.

This work is well named Medical Microscopy. It details in a most charming manner the needs of a beginner, carries him through the trying time of selecting an instrument and its accessories, shows him how to work, to prepare animal tissues, to cut, and stain, and mount.

Justice, of course, can not be done the subject of bacteriology in fifty small pages, but as a guide and an assistance in the study of the more voluminous works upon this important subject it answers its purpose well. The illustrations throughout, many of them colored, are well chosen and executed; the glossary is taken and abridged from Gould's "Illustrated Dictionary of Medicine."

The fact that the work was thought enough of for Surgeon-General Steinberg to order one for every army post is a sufficient guarantee of its excellence. Such a work fills a long-felt want, and we commend it very highly.

Where to Send Patients Abroad for Water Cures and Climatic Treatment. By DR. THOMAS LYNN. The Physicians' Leisure Library. Single copies, 25 cents. Detroit: Geo. S. Davis, Publisher.

This little work thoroughly canvasses the oftentimes perplexing subject of "where to send patients abroad." The author, a Doctor of Medicine, Faculty of Paris; Doctor of Medicine and Surgery, University of New York; Physician to the Bathing Establishments at Aix-les-Bains and Mariloz (in summer) and Nice, is well fitted to discuss so important a subject.

Mineral Waters, Hydropathic Stations, Sand and Mud Baths, Climatic Resorts, "Terrain-Keer" or Exercise Treatment are well written of, and an excellent chapter containing an "Alphabetical Index of Maladies, with Names of Best Places to Send Patients to in Europe," which in itself is more than worth the price of the publication.

Specific Medication and Specific Medicines. Fourth revision. By JOHN M. SCUDDER, M. D., Professor of the Principles and Practice of Medicine in the Eclectic Medical Institute, etc., etc. Fourteenth edition. Cincinnati: John M. Scudder & Sons, Medical Publishers.

With the eclectics there is no name more familiar nor none more revered than that of John M. Scudder. He has written much, and his works are regarded among his followers as the best extant. This little book of four hundred and eleven pages is well written, and it is clearly to be seen that the author is an ardent believer if not an enthusiast in what he writes. To students interested in this method of thinking, the work would prove of great interest. The style is concise, and his propositions plainly stated. To Dr. Scudder the eclectic school owes a great debt, for no one has done so much to extend its doctrine as he, and certainly there can not be a truer disciple in the faith than is evidenced in this little book.

The Care and Feeding of Children. A Catechism for the use of Mothers and Children's Nurses. By L. EMMETT HOLT, M. D., Professor of Diseases of Children in the New York Polyclinic; Attending Physician to Babies' Hospital, etc., New York. New York: D. Appleton & Co. 1894.

This most careful and painstaking author needs no introduction to the profession of this country. This excellent little work, admirably arranged in the form of questions and answers, will fill a long-felt want in the home and nursery.

The questions are succinctly put and the answers as tersely made—to the point always, and bearing much valuable information to ignorant mother and nurse.

Though containing but sixty-six pages it covers much ground, embracing "The Care of Children," bathing, eyes, mouth, skin, etc.; "Infant Feeding," with minute directions, and "Miscellaneous," remarks upon many subjects upon which the average mother is wofully ignorant. We commend this little work most heartily.

Treatise on Diphtheria. By H. Bourges, M. D. Translated by E. P. Hurd, M. D. Physician's Leisure Library. Detroit, Mich.: Geo. S. Davis. 1894.

This is a most excellent little treatise, the most complete of any which has been issued in this series. The subject is dealt with in an able manner; first, from the standpoint of the symptoms, caused by the absorption of the diphtheritic toxine, and secondly, the lesions produced by the presence of the bacillus.

Great stress is laid upon the bacteriological examination of cases for diagnosis, and an elaborate chapter upon the bacillus and upon the technique of the examination is worthy of its distinguished author. It is an excellent little work.

Intercolonial Quarterly Journal of Medicine and Surgery. Vol. I, No. 1, May, 1894. Melbourne: Stilwell & Co., Printers. Subscription price, £1 1s per year.

This journal is the outcome of a resolution passed at the Intercolonial Medical Congress, "That it is desirable to found an *Australasian Medical Journal.*" It is neat in appearance and in its typographical effect, and contains five original articles, headed by an exhaustive paper upon Dysphemia; seven clinical reports, original digests of current literature, reviews, and an editorial department, containing in all ninety-three pages. We are pleased to welcome it upon our exchange list.

Books and Pamphlets Received.

Physical Culture of Children.—All outdoor games that involve running and active movement of any kind are useful adjuncts in physical development, writes Elisabeth Robinson Scovil in the September Ladies' Home Journal. An immense amount of exercise is taken under the guise of diversion. Battledore and shuttlecock, which was long a favorite amusement, is a capital indoor game where there is room to play it, and might be revived with advantage. Bean-bags, colored bags filled with beans and aimed at a ring or other mark, and the form of quoits played on shipboard with rings of rope may be utilized to furnish exercise on rainy days. Especial attention should be paid to ven-

tilation when the children are exercising indoors. The respiration is quickened, the lungs demand more air, and there should be a plentiful supply of oxygen to meet it. Impure air poisons the delicate tissues of children; that which has been devitalized by passing through the lungs is unfit to be breathed again. If the impurities with which it is loaded could be visible we would shrink from inhaling it, and wonder at our folly when by raising the window a fresh supply is at our command.

We are always glad to welcome Truth when it reaches this office, for its pictures are wonderful examples of artistic coloring, while the letter press is brilliant and enjoyable. The issue of September 1st, as usual, contains many characteristic features, the contributions being exceptionally bright, varied, and delectable. Notably good is the little dramatic skit, entitled "My Punctual Wife." The poems of this number are timely and not so profound but that they may be understood in a single reading. Truth is appreciably improving under its present editorial management.

Edward Bok says that the hard times have driven thousands of women into writing, and that the "readers" who have to read the manuscripts sent to magazines are taxed to their utmost capacity.

The Graphic Study of Electrical Currents in Relation to Therapeutics. By J. H. Kellogg, M. D., Battle Creek. Reprint from Journal of the American Medical Association.

Mooted Points as to Fractures of the Arm, with Notice of an Improved Splint. By J. McFadden Gaston, M. D., Atlanta, Ga. Reprint from the Medical News.

Scorbutus in Infants. By William P. Northup, M. D., and Floyd M. Crandall, M. D., New York. Reprint from the New York Medical Journal.

Operative Surgery of the Gall Tracts, by John B. Murphy, M. D., Chicago. Reprinted from the Chicago Medical Recorder.

Wound of Left Subclavian Artery. By. J. N. Baughman, M. D., Flat Lick, Ky. Reprint from the Journal of the American Medical Association.

A Case of Cysticercus of the Vitreous. By W. Cheatham, A. B., M. D., of Louisville. Reprint from the Annals of Otology and Ophthalmology.

Case of Fibro-Myxo-Chondro-Osteo-Sarcoma of Branchial Origin, etc. By A. C. Bernays, M. D. From St. Louis Courier of Medicine.

Treatment of Anal Fistula. By J. McFadden Gaston, M. D., of Atlanta, Ga. Reprint from the Journal of the American Medical Association.

A New Dynamometer for Use in Anthropometry. By J. H. Kellogg, M. D., Battle Creek, Mich. Reprint from Modern Medicine.

Subjective *versus* Objective Symptoms in Chronic Diseases Needing Orificial Treatment. By H. E. Beebe, M. D., Sidney, Ohio.

The Bristol Medical School. Presented by the Executive Committee to the members of the British Medical Association.

The Non-surgical Treatment of Ovarian Diseases. By J. H. Kellogg, M. D., Battle Creek. Reprint from Modern Medicine.

Rest in Gunshot Wounds of the Chest. By Herne Marks, M. D., St. Louis. Reprint from the St. Louis Medical Review.

The Uric Acid Diathesis and Its Treatment. By John F. Barbour, M.D., Louisville. Reprint from the American Therapist.

The Physician from a Financial Standpoint. By A. B. Walker, Canton, Ohio. Reprint from the Cleveland Medical Gazette.

The Influence of Dress in Producing Physical Decadence of American Women. By J. H. Kellogg, M. D., Battle Creek.

The Sympathetic Nervous System. By W. F. Metcalf, M. D., Detroit, Mich. Reprinted from the Physician and Surgeon.

Rupture of the Uterus. By Magnus A. Tate, M. D., Cincinnati. Read before the Cincinnati Academy of Medicine.

Intraligamentous and Retroperitoneal Tumors of the Uterus and its Adnexa. By Wm. H. Wathen, A. M., M. D., Louisville.

Ulceration of the Rectum. By Charles C. Allison, M. D., Omaha, Neb. Reprinted from the Medical Herald.

The Automatic Nervous Ganglia of the Female Pelvic Viscera. By H. E. Beebe, M. D., Sidney, Ohio.

The Infecting Female. By E. R. Palmer, M. D., Louisville. Reprint from the American Practitioner and News.

Non Nocere. By A. Jacobi, M. D., New York. Reprinted from the Medical Record.

Constipation and Diarrhea. By H. E. Beebe, M. D., Sidney, Ohio.

Sexual Neurasthenia. By H. E. Beebe, M. D., Sidney, Ohio.

The Physician and the Pharmacist. By Edward Speidel.

The Alumni Bulletin of the University of Virginia.

We would be under many obligations if the different medical journals would insert the following card:

To the Medical Profession:

The editors of MATHEWS' MEDICAL QUARTERLY desire to obtain the names of all reputable surgeons in the United States who limit their practice to diseases of the rectum.

Address

Editors of MATHEWS' MEDICAL QUARTERLY,
P. O. Box 434, LOUISVILLE, KY.

Notes and Queries.

TRI-STATE MEDICAL SOCIETY.—The sixth annual meeting will be held in Atlanta, Ga., October 9th, 10th, and 11th, at the Kimball House. Partial list of papers:

The Responsibility of a Class of Criminals from a Medico-Legal Point of View, J. C. LeGrand, Anniston, Ala.

Treatment of Stricture of the Urethra by Electrolysis, P. L. Brouillette, Huntsville, Ala.

Urethral Surgery Ten Years Ago and To-day, T. C. V. Barkley, Chattanooga.

Reflex Neurosis in the Male, Andrew Boyd, Scottsboro, Ala.

The Pathological Import of Albumen in the Urine, E. B. Ward, Selma, Ala.

How to do Abdominal Section without Fuss, Feathers, or Foolishness, and with Immunity from Sepsis, Joseph Price, Philadelphia.

Puerperal Septicemia, with cases Illustrating the Several Varieties, J. R. Rathall, A. M., M. D., Chattanooga.

Essentials of Obstetric Nursing, R. R. Kime, Atlanta.

Pernicious (or inveterate) Vomiting of Pregnancy: A Plea for the Mother: Based on Cases in Actual Practice, E. A. Cobleigh, Chattanooga.

The Induction of Labor to Prevent Blindness, Frank Trester Smith, Chattanooga.

Slaughter of the Innocents, E. van Goidtsnoven, Atlanta.

Prognosis and Treatment of Placenta Previa, Richard Douglas, Nashville.

Uterine Cancer, George R. West, Chattanooga.

Treatment of Uterine Fibroids, W. Gill Wylie, New York.

A Report of Some Rare Surgical Lesions Connected with the Liver, John A. Wyeth, New York.

The Treatment of Stone in the Kidney, W. E. B. Davis, Birmingham, Ala.

Tuberculosis of the Kidney and Bladder, H. Berlin, Chattanooga.

Some Causes Leading to Invalidism in Women, J. B. S. Holmes, Atlanta.

Amputation of the Mamma for Carcinoma and Treatment of the Axilla, B. W. Bizzell, Atlanta.

Excision of Malignant Tumors of the Breast, Willis F. Westmoreland, Atlanta.

Some Remarks upon Brain Surgery, with Report of Cases, Paul F. Eve, Nashville.

The Surgical Treatment of Empyema, J. A. Goggans, Alexander City, Ala.

Appendicitis: Its Surgical Treatment with Report of Cases, R. J. Trippe, Chattanooga.

The Treatment of Injuries and Inflammation of the Joints, William L. Nolan, Chattanooga.

Burns and the Treatment Thereof, T. Ellis Drewry, Griffin, Ga.

Is there Danger of not getting Good Union after Tenotomy, C. W. Barrier, Columbus, Ga.

Hygienic Treatment of Syphilis, T. M. Baird, Hot Springs, Ark.

Electro-Therapeutics, J. P. Stewart, Chattanooga.

Headaches: Their Etiology and Treatment, R. P. Johnson, Chattanooga.

Migraine: Its Etiology and Treatment, Hugh Hagan, Atlanta.

Tuberculosis of the Nasal Bones, B. F. Travis, Chattanooga.

Paresis and Paralysis of the external Rectus of the Eye, with Report of two Cases, Dunbar Roy, A. B., M. D., Atlanta.

The Use of Hydrastic Canadensis in Diseases of Mucous Membranes, P. R. Cortelyn, Marietta, Ga.

Combination of Carbolic Acid and Camphor as an Antiseptic and Local Anesthetic, William Perrin Nicholson, Atlanta.

Some Practical Points in the Treatment of Typhoid Fever, James B. Boid, Atlanta.

Treatment of Pneumonia in Children, Frank S. Parsons, Philadelphia.

Adenoids and their Sequelæ, Arthur C. Hobbs, Atlanta.

The Treatment of Smallpox, C. H. Holland, Chattanooga.

An Outline of the History of Medicine and Surgery in Georgia, L. E. Grandy, Atlanta.

Rectal Surgery, J. M. Mathews, M. D., Louisville, Ky.

Reduced rates on the railroads on the certificate plan.

MISSISSIPPI VALLEY MEDICAL ASSOCIATION.—The twentieth annual meeting of this well-known organization will be held as previously announced, at Hot Springs, Ark., November 20, 21, 22, and 23, 1894. The arrangements are now about completed. The General Committee of Arrangements held their final meeting on September 1st, in the city of St. Louis, there being present, in addition to the committee, President Scott, of Cleveland, and Secretary Woodburn, of Indianapolis. Dr. Holland, of Hot Springs, presided. All of the detail work pertaining to the meeting was completed. Owing to the hearty co-operation of the railroad officials the arrangements in this direction will surpass those of any previous meeting.

On motion of Dr. I. N. Love, of St. Louis, a committee of five railroad officials was appointed to obtain a reduction of rates. This committee consists of Messrs. Townsend, Snyder, Wishard, Ives, and Crane.

The fact of the meeting being held in Hot Springs will undoubtedly cause a large attendance. Indeed, from the number of favorable replies to his preliminary announcements, the secretary feels justified, even thus early, in predicting an attendance double that of any previous meeting.

The secretary desires to urge upon all physicians to attend this gathering. Come, and bring your families and friends, and not only a profitable meeting but a royal good time will reward you for the exertion. FREDERICK C. WOODBURN,

Secretary.

MEETING OF MEDICAL PUBLISHERS.—The first annual meeting of the American Medical Publishers' Association occurred at Hot Springs, Va., on August 13th and 14th, and proved a most profitable and happy event, many of the members being accompanied by their ladies, who enjoyed the pretty scenery and lent a graceful charm to the occasion. An overland trip to Warm Springs comprised a pleasant feature of the first day. After the transaction of the usual routine business the President, Dr. Landon B. Edwards, read an able paper on "Advertising and Advertising Agencies," which was well received and ordered printed. The reports of the Secretary and Treasurer were examined, and the finances of the Association found to be in good condition.

Thirteen applications for membership were presented and acted upon favorably. The Secretary was instructed to investigate the laws of different States governing charters of incorporated bodies, and report at the next meeting. Dr. J. W. Clausen, of the *Times and Register*, Philadelphia, was elected to fill a vacancy in the Executive Committee. Upon motion it was decided that all annual meetings hereafter should be held just prior to the sessions of the American Medical Association, the next meeting being set for Monday, June 5, 1895, at 9 A. M., in the Utah House, Baltimore, Md.

CHARLES WOOD FASSETT, *Secretary.*

DR. G. FRANK LYDSTON will lecture every Monday at 8 P. M., beginning October 1, 1894, at the Masonic Hospital of Chicago, 367 Washington Boulevard. Subjects: Surgery of the Prostate, Bladder, and Kidneys; Chronic Ulceration of the Female Genitalia; Appendicitis; Surgery of the Rectum; Urethral Stricture. The lectures will be illustrated by special charts and drawings, and are free.

NOTICE TO CONTRIBUTORS.

Articles and letters for publication, books and articles for review, and communications to the editors, advertisements, or subscriptions, should be addressed to EDITORS OF MATHEWS' MEDICAL QUARTERLY, BOX 434, LOUISVILLE, KY.

All necessary illustrations will be furnished free of expense to authors where they send black and white drawings—or negatives—with their MSS.

All articles for publication in the QUARTERLY will be considered only with the distinct understanding that they are contributed to it exclusively.

Alterations in proof-sheets are charged at the rate of 60 cents per hour, which is the printer's rate to the journal.

Reprints may be had at printer's rate if request is made upon proof when it is returned.

All manuscript must be received by the first of the month preceding its publication.

Remittances may be made by check, money order, draft, or registered letter.

The Editors are not responsible for the views of contributors.

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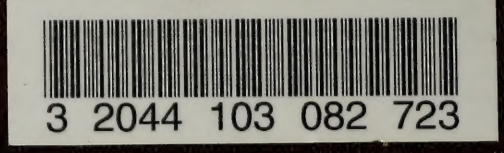
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